INTEGRATED GUIDANCE FOR SHELTER MANAGEMENT

VOLUME III

SHELTER MANAGER'S GUIDE

Guidance for In-Shelter Use

Prepared for Office of Civil Defense
Department of the Army, Office of the Secretary of the Army
Under Contract OCD-PS-64-57 ☐ OCD Work Unit 1533A

JUNE 1965

Institute for Performance Technology
AMERICAN INSTITUTES FOR RESEARCH ☐ Pittsburgh, Pennsylvania

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OCD REVIEW NOTICE

This report has been reviewed in the Office of Civil Defense and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Office of Civil Defense.

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INTEGRATED GUIDANCE FOR SHELTER MANAGEMENT

This document is one in a series of three volumes designed to aid the shelter manager in meeting his responsibilities in peacetime and, should the need occur, under emergency conditions.

What binds these documents into a unified package is a concept of shelter management. This concept holds that every shelter manager must prepare himself, through training, and must prepare his shelter facility, through planning, to meet any situation requiring the use of the shelter. In addition, the concept holds that the in-shelter performance of the manager will improve if he is provided with guidance materials to support his decision making, no matter how well trained he may be.

Training, planning, and in-shelter guidance, therefore, are viewed as three key features of a shelter management program, and each is represented by a separate volume in the Integrated Guidance for Shelter Management series.

Each document in the set stands as a complete work that can be read and applied independently of the others. However, each volume contains technical information that will not be found in the others. For example, the subject of food is treated in a different fashion in each volume. The training document discusses background factors and management considerations in shelter feeding. The planning guide emphasizes pre-occupancy procedures for establishing a feeding capability in the shelter. The guide for in-shelter use presents a priority-ordered listing of management actions pertaining to shelter feeding. This illustration suggests that, for a shelter manager to derive maximum benefit from the guidance materials, he should consider the document as an integrated package. When the reader approaches the documents as a unified set, the volume numbers reflect the optimum order in which they should be read.

Volume I, Introduction to Shelter Management, has been designed as a training text. It provides an

overview of the scope and nature of the shelter manager's duties and responsibilities. The text emphasizes general management principles and considerations, rather than specific operational procedures. This enhances its utility as an introduction to the topic of shelter management.

Volume II in this set of documents is entitled Planning a Group Shelter. It deals with the peacetime responsibilities of the shelter manager which focus upon the achievement and maintenance of a state of operational readiness of a shelter facility. The planning guide discusses the principal factors that must be considered in planning and developing a group shelter. It also identifies methods for meeting the requirements associated with these factors, and presents specific information that would permit the shelter manager to select methods appropriate to his needs.

The Shelter Manager's Guide, the last volume in the series, has been developed for use during the period of shelter occupancy. This means that the content, as well as its organization and presentation, has been designed for optimum usefulness under emergency conditions. The Guide lists priority-ordered management actions and decisions, arranged according to the phases of a shelter stay.

The selection and recruitment of shelter managers is another key aspect of the shelter management program. Guidance in this area is more appropriately used by those responsible for obtaining shelter managers than by the managers themselves. For this reason, a fourth published guide entitled Selection and Recruitment of Shelter Managers, has not been included in this unified package. The Selection and Recruitment Guide, however, is available through the same channels through which the other guidance documents have been obtained.

PRE-OCCUPANCY INSTRUCTIONS

This manual is to be used as a step-by-step management guide to in-shelter living in a nuclear disaster. These generalized guidelines should cover most of the in-shelter problems and emergency situations which can be anticipated. Each shelter, however, will have individual problems relating to variations in facilities, extra supplies, population differences, climate considerations, and the like. To maximize the survival and the well-being of shelterees under emergency conditions, the shelter manager should carry out the instructions on this pre-occupancy checklist during peacetime.

1. Fill in the following information for each specific shelter.

   a. Capacity, pp. 3, 6. Complete capacity information.

   b. Shelter map, p. 25. Complete the map as directed. Remember to include the location of supplies outside the shelter area within the building as well as important supplies in adjoining buildings.

   c. Legal status of manager and pre-assigned staff, p. 26. As instructed.

   d. OCD supplies, p. 27. Enter the number of kits, their location, their contents, and trained personnel who will be responsible for the supplies.

   e. Augmented supplies, p. 28. Augmented supply capability must include an enumeration of all available items, their location, special instructions for their procurement, and trained persons who will be responsible for getting these supplies.

2. Consider individual problems in your shelter and their solutions. The manual should be studied carefully to consider how the guidance

should be modified or expanded to take care of problems relating to your specific shelter. The following are examples of types of problems which should be considered.

a. Communications, p. 3, D. Select the best way of setting up communications if your shelter happens to be a multi-area, or multi-floor, facility. Specific routes and procedures may be developed in advance and specific personnel may even be assigned to handle this responsibility.

b. Augmented supplies, p. 5, A. In some shelters, it may be possible to pre-assign personnel to pick up specific items on their way to the shelter area.

c. Temporary task team assignments, pp. 7-9. Personnel may be pre-assigned, and guidance cards may be prepared which clearly outline duties.

d. Fallout protection, p. 12. Have the safest areas of the shelter pre-determined and designated. Also, decide what additional fallout protection is possible, and prepare materials and procedures to increase this protection.

e. Water sources, p. 17, B & C. Find out from qualified personnel what additional sources of potable water are available, where they are located, and how they can be obtained. Pre-assign personnel to handle this responsibility.

f. Organization, p. 30. On the basis of shelter size, configuration, and probable population, prepare specific procedures and, if possible, personnel assignments to organize the shelter into task teams and living groups.

3. For the use of augmented facilities, prepare operational instructions and post them on, or above, each specific piece of equipment or

facility. For example, ventilation or air-conditioning equipment should have operating, maintenance, and repair instructions a ailable with the machinery.

4. Select, recruit, and train a core management staff. Use available civil defense documents on selecting and training the management staff. Periodic refresher courses or drills are also recommended.

5. All supplies and facilities should receive proper maintenance according to OCD or manufacturer instructions. Appropriate personnel should be assigned to this responsibility, and routine reports should be submitted to the shelter manager.

6. All guidance and information materials should be periodically reviewed and updated.

HOW TO USE THIS GUIDE

The Shelter Manager's Guide will assist you in directing the organization and operation of this shelter.

The Guide provides a list of management decisions and actions and the information needed to arrive at them.

Guidelines that are in the darker, bold-face type represent major actions or decisions. The guidance in lighter type after each major action or decision consists of either: (a) information items needed to take a required action, or (b) other actions or decisions that must be taken in support of each major management guideline.

Do not try to perform all management tasks by yourself. Delegate as much responsibility as possible to others for carrying out specific tasks. Your major duties are to make the decisions that affect the survival and adjustment of the shelter population, and to provide guidance and direction to those who have been assigned to implement your decisions.

This Guide has been designed to cover a wide variety of shelter situations. However, special problems in your shelter may make it necessary for you to modify some of the recommended procedures.

The Guide is organized in the following way:

Section 1. Entry Phase, covering the first few hours in-shelter.

Section 2. Initial Organization and Operations Phase, covering the first day or two in-shelter.

Section 3. Routine Phase, consisting of additional or modified guidelines for the remainder of the shelter stay.

Section 4. Temporary Emergence Phase, covering preparation for temporary exit.

Section 5. Contingencies, consisting of decisions and actions to be taken in the event of a shelter emergency.

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ENTRY PHASE

(First 1-2 Hours in Shelter)

This section lists the initial management responsibilities. These include:

1. Preparing shelter for occupancy.
2. Filling and securing the shelter.
3. Assuming command.
4. Initial protective actions and operating procedures.
5. Information and reassurance to shelterees.

PREPARE SHELTER FOR OCCUPANCY

A. Turn on all lights and open all doors necessary to fill the shelter. Check doors and lights of the building as well.

1. Light switches, entrances, and location of keys are marked on the shelter map, page 25.

2. Emergency lighting equipment is described in the supply chart, page 28.

B. Assign first incoming males to help clear entranceways and obstructions (desks, shelves, etc.).

FILL THE SHELTER

The capacity of this shelter is_____ persons.

A. Assign personnel to every shelter entrance to keep incoming shelterees moving away from the entrance.

1. If possible, have traffic assistants count number of incoming people.

2. Have them continually reassure shelterees that they are in a protected area.

3. Have them instruct shelterees to remain in their places, remain quiet, refrain from smoking, and wait for instructions.

B. If shelterees cannot be counted at the doors, assign person(s) to count number of people already in the shelter.

C. Assign person(s) to count, or estimate as closely as possible, the number of people waiting to enter the shelter.

D. If the shelter has several floors or separated areas, see that above procedures are followed in each separate area.

1. If phone communications cannot be used, send runners with instructions to each floor.

ASSUME COMMAND AS SOON AS POSSIBLE

A. As manager of the shelter, introduce yourself to the shelterees and state the basis of your authority (page 26).

1. Wear a visible sign of rank, such as an armband or helmet.

2. Demonstrate strong, personal leadership by your voice and bearing.

B. If someone has begun organizing the shelter prior to your arrival, make him one of your deputies to take advantage of his leadership abilities.

C. Briefly explain the following to shelterees:

1. The shelter offers protection from fallout.

2. Sufficient food, water, medical, and sanitation supplies are available for an extended period.

3. People should be prepared to receive instructions and implement them immediately.

D. If shelter has several separate areas or floors, appoint mature adults with management experience to go to each area to present above information for you.

1. If possible, provide your representatives with visible signs of authority.

2. Have them tell people that the manager will give them a personal briefing as soon as he can.

AUGMENT SHELTER SUPPLIES

A. Before shelter doors are closed, ask for volunteers who are familiar with the building to bring back vital supplies from areas near the shelter.

1. The location of supplies is marked on the shelter map, page 25.

2. Specific supplies available within the building are listed on the supply chart, page 28.

3. Make sure that supply team volunteers are identified and can return to the shelter.

CLOSE THE SHELTER DOORS

Shelter capacity is _____ persons.

A. Order the shelter doors to be closed when maximum capacity has been reached.

> CONTINGENCY
>
> If there are many people outside who cannot be accommodated in this shelter, see "Overcrowding," page 142.

B. Place adult male volunteers in charge of closing the door and seeing that it remains closed.

1. If the shelter has a door, close it and place equipment or materials in front of it.

2. For shelter entrances without doors, improvise doors out of dense materials (e.g., cartons of supplies), if feasible.

SET UP A TEMPORARY SHELTER ORGANIZATION

A. **Unless pre-appointed teams are present, assign persons AS NEEDED to carry out operations requiring immediate attention. These assignments will be temporary until permanent teams can be set up.**

1. Select temporary personnel on the basis of:
   a. Knowledge of a person's skills and experience, or, if this is not feasible.
   b. Requests for volunteers with specific skills and experience most closely related to those needed for shelter operations.

B. **Briefly inform persons selected about their immediate duties.**

1. In most cases, their responsibilities will consist of:
   a. Inventorying available resources.
   b. Checking equipment operability.
   c. Beginning emergency operations.
2. Provide personnel with any available written guidance, such as prepared team cards, instruction booklets, etc.
3. Have personnel look for and read operating and maintenance instructions posted on or near equipment and supplies.

C. **Types of temporary personnel likely to be needed soon after time of entry:**

Persons Needed	Duties	Page Numbers
Security Team (males)	1. Clear entrance and shelter of obstructions	2
	2. Direct traffic	3
	3. Count people	3
	4. Close doors on order of shelter manager	6

Persons Needed	Duties	Page Numbers
Messengers	1. Relay messages to and from shelter management	3
Management Deputies (number depends on shelter size and configuration)	1. Help form teams under their direction	31
	2. Delegate and supervise tasks	32
Community Group Leaders (depends on shelter size and configuration)	1. Begin to group shelter population	10
	2. Select people to help with initial grouping	10
Supply Team	1. Bring back augmented supplies from outside the shelter	5,28
	2. Select people to help locate supplies	5,27,28
Equipment Operation, Repair, and Maintenance Team (if shelter has equipment)	1. Check operability of equipment	19
	2. Prepare to operate	19
	3. Repair equipment or shelter as needed	19
Radiological Defense Team	1. Locate equipment	12
	2. Read directions and check for equipment operability	12
	3. Begin to monitor for fallout	12
	4. Start protective actions	12,13
Safety and Fire Team	1. Locate fire-fighting supplies	16,28
	2. See that smoking is prohibited	16
	3. Set up fire watch	16
	4. Prepare to fight fires	16

Persons Needed	Duties	Page Numbers
Medical Team	1. Give emergency first-aid treatment	15
	2. Inventory supplies	15
	3. Identify major medical problems	15
Food and Water Team	1. Locate and check OCD supplies	17,23,27
	2. Locate and collect, or tap, augmented sources	17,23,28
Sanitation Team	1. Locate and set up toilet facilities	22
Communication Team	1. Locate, monitor, and operate equipment	20,28
	2. Keep records of all incoming and outgoing messages	20
Administration Team	1. Find out and record skills and occupations of shelterees	21
	2. Begin to record shelter events	21

COMMUNITY GROUPS (LIVING GROUPS)

A. At the same time that task teams are carrying out immediate operations, have a deputy divide shelterees into temporary living groups.

1. In shelters or separate shelter areas containing many more than 500 people, begin grouping the population into groups of 200-300. After these groups have been formed, they can be divided into smaller sections of 40-70 persons each.

2. In shelters or separate shelter areas containing fewer than 500 persons, begin grouping the population into sections of 40-70 persons each.

B. Inform shelterees that the initial organization is temporary, and that reassignments can later be made to reunite families and friends.

SHELTER TASKS REQUIRING ATTENTION IN THE ENTRY PHASE

This section describes specific tasks that must be initiated soon after shelter entry. Delegate responsibility to your temporary staff, so that the tasks are completed as soon as possible.

Keep in mind that the behavior of all shelterees, including yourself, will be affected by strong reactions to the disaster.

1. Physical symptoms may include trembling, difficulty in speaking, physical upsets such as nausea, diarrhea, fatigue.

2. Emotional reactions may range from stunned apathy to hostile, self-centered excitability.

3. Work efficiency may be decreased.

4. Communication may be contradictory and confused.

Most people should recover spontaneously within several hours without any special help.

INITIAL PROTECTIVE ACTIONS AGAINST FALLOUT

A. Refer to OCD supply chart, page 27, for location of radiological equipment.

B. If trained monitors are not available, appoint a person(s) with scientific or technical experience to locate radiological instruments, read instructions, check the operability of instruments, and begin to take radiation readings.

1. Have monitors read the Handbook for Radiological Monitors, found with the radiological kit.

C. Station monitors at shelter entrance until arrival of fallout. They should notify you as soon as fallout begins to descend.

1. Fallout will look and behave like sand or dirt.

2. Fallout could arrive about 30 minutes after blast in areas near the detonation.

3. If there is no monitoring equipment or if it is inoperative, the following guidelines may help to determine the arrival of fallout:

   a. In the daytime, place a white plate or cloth in the exposed area outside the shelter door. Fallout will be clearly visible on it.

   b. At night, a flashlight beam will illuminate fallout as it descends.

D. Place people in the part of the shelter most distant, both horizontally and vertically, from expected location of fallout.

E. Increase shielding, where possible, by covering or baffling doors, windows, and other shelter openings (except ventilation outlets) with sandbags, earth, or other dense materials.

1. The greater the density of material placed between the source of radiation (fallout) and the shelterees to absorb (or stop) the radiation, the greater the protection will be.

2. A volunteer team of able-bodied males, under supervision of a person with relevant experience, can be used.

3. Figure 1 (page 14) illustrates how a baffle may be constructed in front of a door, which will provide radiation protection while allowing for natural ventilation and personnel movement.

4. For ground-level or below-ground shelters, concrete blocks, rocks, or other dense materials, if available outside the shelter, should be piled against exposed walls and outside openings (except ventilation outlets).

WARNING: Protective work should be done outside the building only where detonation is not imminent and before the arrival of fallout.

F. Avoid erecting hastily constructed barriers within the shelter that can increase hazards if shelter is subject to minor blast damage.

1. Cartons of supplies or metal objects should not be piled very high until the time when danger from blast is considered minimal.

G. After fallout has arrived, radiological personnel should visually inspect persons and objects brought into the shelter for the presence of fallout particles.

1. Simple decontamination procedures are described in the Handbook for Radiological Monitors. These include:

   a. Brush shoes, shake or brush clothing before or at entrance.

   b. Brush or wipe contaminated portions of skin or hair.

   c. Brush particles from objects brought into the shelter.

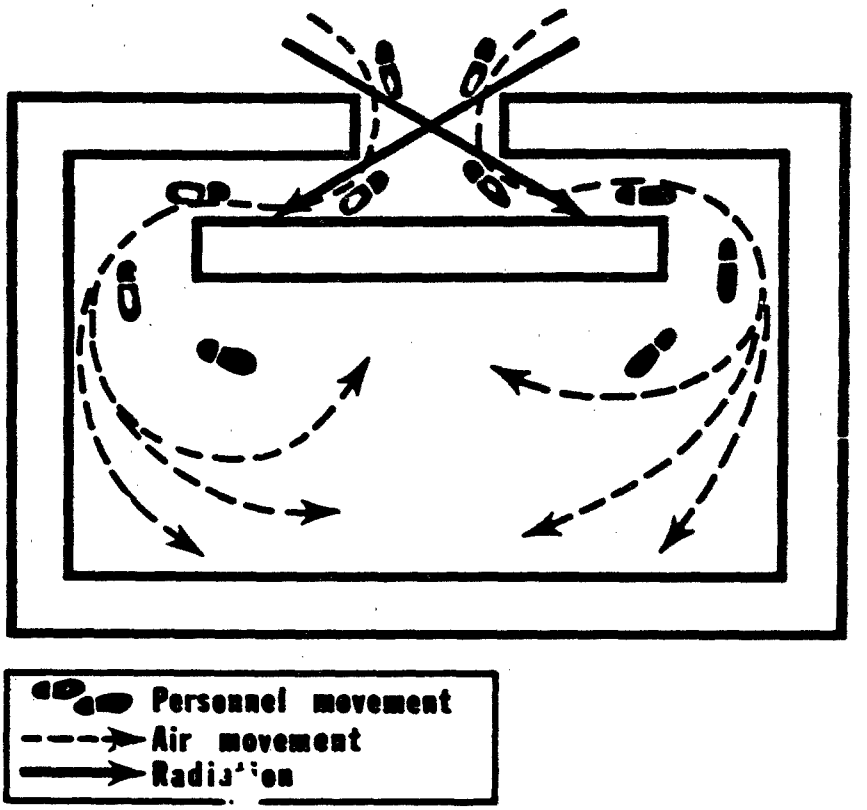


Figure 1. Baffle Shielding

MEDICAL CARE

CONTINGENCY

If mass casualties arrive, see page 149.

A. Select the most qualified person(s) to assume immediate charge of medical care.

1. Immediate emergency treatment should be given in a temporary medical area if shelterees are entering with injuries or serious illnesses.

B. Refer to supply charts, pages 27 and 28, for content and location of medical supplies.

1. Supplies should be used carefully until an inventory can be taken and supplies rationed.

2. IMPORTANT: The OCD medical supplies are adequate for first-aid treatment and minor medical problems. They are not intended for treatment of major illness and injury.

C. As soon as possible after entry, check the health status of the shelter population.

1. Check for major injuries, communicable diseases, and other serious illnesses.

2. Have sick and injured report to the treatment area, or have the medical team circulate through the shelter, whichever seems more efficient.

FIRE AND SAFETY

CONTINGENCY

In the event of fire, see pages 145-146.

A. See supply chart, page 28, for location of fire-fighting equipment.

B. Remind shelterees not to smoke until smoking rules have been established.

C. Assign volunteers for temporary fire-watch duty, both inside and outside the shelter.

1. Inside the shelter, the fire watch should be continuous.

2. Outside the shelter, the fire watch should be on duty until the arrival of fallout.

D. Select a temporary team to locate or improvise fire-fighting equipment, and to prepare to fight fires.

WATER

A. Refer to OCD supply chart, page 27, for number and location of OCD water drums.

B. Locate additional potable water sources (page 28).

1. Possible sources are:

   a. The public water system, which may still be operable.

   b. The building water system--hot-water tanks, water-closet flush tanks, storage tanks, etc.

   c. Miscellaneous containers which may be filled with water, such as bathtubs, sinks, buckets.

   d. Liquid-packed canned food, melted ice, etc.

   e. Privately stocked water supplies or wells.

C. Plumbers, maintenance men, or those familiar with the building water system should be selected to tap these sources.

1. General tapping procedures are:

   a. Close intake valves to the building and to the water source being tapped to prevent backflow.

   b. To permit water to flow, open a valve or faucet at the highest point possible above the water source (highest level in a building, top of tank, etc.). Close all other valves, except the outlet valve, at the bottom.

   c. Find a hose or faucet to control the flow of water from the outlet.

ATMOSPHERE CONTROL

Instruct shelterees to remain as quiet and inactive as possible in order to reduce temperature rise, and prohibit smoking until it is clear that the ventilation is adequate for it.

TECHNICAL OPERATIONS, REPAIR, AND MAINTENANCE

Rapidly scan the following guidelines to see which are relevant for this shelter.

> CONTINGENCY
>
> In the event of shelter damage from weapon effects, see pages 143-144.

A. Refer to supply chart, page 28, for description of ventilation, lighting, and power equipment.

B. Instruct personnel to immediately report to the manager all technical problems which would affect the operation of the shelter.

Atmosphere Control

A. If ventilation equipment is not working and cannot be repaired, try to estimate how long the shelter will be habitable without the equipment. Determine whether to find a new shelter before the arrival of fallout.

Power

A. Assign technical personnel to locate and test operability of equipment.

B. Prepare to hook up essential equipment to the auxiliary generators, but continue to use normal power as long as it is available.

Utilities

A. Have building custodian or someone familiar with the building shut off the heating system unless it is extremely cold outside.

B. Have utility lines (gas, electric, water) checked to see that they are in working order.

Lighting

A. Have portable emergency lighting placed in key locations, and prepare to hook up to emergency power source, if needed.

COMMUNICATION

A. Refer to augmented capability supply chart, page 28, for communication equipment which may be available within the shelter.

B. Ask shelterees to volunteer transistor radios, and establish procedures for monitoring incoming broadcasts.

1. If radios are not being volunteered, have owners monitor incoming broadcasts on a staggered system, so as to conserve battery power.

C. Assign temporary personnel to set up a communications log, and to monitor and enter all incoming messages in the log.

D. If equipment for communications from the shelter to other centers exists and pre-appointed personnel are not available, select skilled persons to set up the equipment (if not already set up) and to operate it following pre-established procedures.

ADMINISTRATION

Assign someone to keep records during shelter entry, and to prepare to register shelteree skills and occupations as soon as possible. (See page 159 for sample form.)

SANITATION

A. Refer to OCD supply chart, page 27, for content and location of OCD sanitation kits.

B. Assign personnel to locate and check the normal washroom facilities, if they exist in the shelter.

1. A toilet tank holds about four gallons of potable water; therefore, check availability of drinking water before using washroom facilities for normal purposes.

C. Locate one or more areas for the OCD chemical toilet.

1. Place facilities away from food area and near a ventilation exhaust.

2. Filled sanitation drums will be difficult to move; therefore, consider the distance to the shelter exit or the place where the filled drums will be emptied when locating toilet facilities.

3. Toilet should be sheltered from public view by a physical barrier or an improvised screen.

4. Set up one commode for 50 shelterees.

   a. Set up more commodes if:

      (1) Separate male and female toilet facilities are planned.

      (2) There are many children in-shelter.

      (3) Illness is present that requires frequent toilet use.

FOOD

A. Refer to OCD supply chart, page 27, for content and location of food rations. (See page 28 for other available food.)

B. If food supplies are brought in after the arrival of fallout, have persons visually inspect food for presence of fallout particles and clean food off, if necessary. (See page 51 for guidelines.)

BUNKING (IF SHELTER HAS BUNKS OR BEDS)

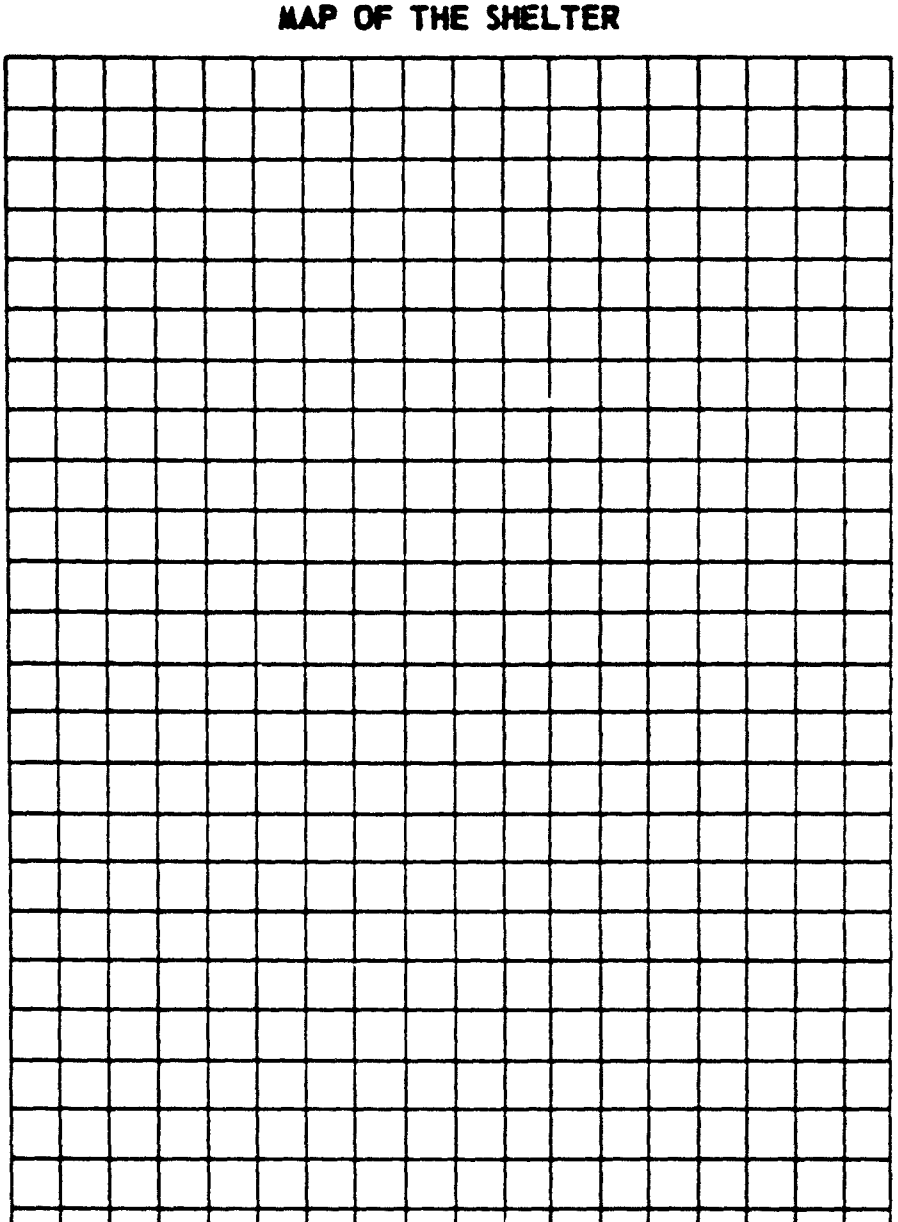
A. If bunks are standing during entry, use them:

1. To reduce crowding.

2. To begin shelter organization, by temporarily assigning people to them. Start filling bunks furthest from the entrance first.

3. As an emergency treatment area for seriously ill and injured persons.

MAP OF THE SHELTER



1. Shelter entrances and exits.
2. Location of keys.
3. Light switches.
4. Sanitation areas.
5. Supply areas.
6. Management area.
7. Communications.
8. Location of supplies outside the shelter area in the building.
9. Location of equipment.

PRE-ASSIGNED SHELTER MANAGEMENT STAFF

(Titles, names, addresses, and phone numbers of all persons assigned to the shelter management staff should be completed below prior to shelter occupancy.)

LEGAL AUTHORITY OF SHELTER MANAGEMENT

(Appropriate legal codes that establish shelter management authority should be cited here.)

OCD Supply Chart

OCD SUPPLIES AND NO.	LOCATION	CONTENT	TRAINED PERSONNEL
Radiological Equipment Number of Kits:			
Medical Number of Kits:			
Sanitation Kit III Kit IV			
Water Number of Drums: (17.5-gallon steel drums lined with two polyethelene bags)			
Food			

Augmented Supply Capability

Available Items In or Around Shelter	Location	Special Instructions/ Trained Personnel
Ventilation (fans, portable air-conditioning units) 1. 2.		
Auxiliary Power 1. 2.		
Emergency Lighting (flashlights, batteries, etc.) 1. 2. 3.		
Fire-Fighting Equipment 1. 2.		
Communication (telephones, radios, etc.) 1. 2. 3.		
Water (building supply, toilet closets, boiling, etc.) 1. 2. 3.		
First-Aid Supplies 1. 2.		
Tools & Cleaning Equipment (brooms, hammer, saw, etc.) 1. 2. 3. 4.		
Atmosphere-Monitoring Devices (CO & CO_2 detectors, etc.) 1. 2. 3.		
Food (vending machines, kitchens) 1. 2. 3.		
Writing & Recreational Materials (paper, pencils, books, etc.) 1. 2. 3.		
Blankets, Pillows, Cushions		

INITIAL ORGANIZATION AND OPERATIONS PHASE

(First 24-48 Hours in Shelter)

During this period, the shelter manager should exert strong personal leadership to help the shelterees adjust to shelter living. The first day or two will be a period of orientation and adjustment for shelterees who may be fearful about their own safety and grieving about missing loved ones.

Several management steps must be taken within the first 24 hours:

1. Assign shelterees to living groups and to essential task groups.
2. Inform people of the requirements of shelter living.
3. Organize shelter resources by taking inventories and determining initial rationing of food, water, medicine, etc.
4. Schedule shelter activities and define shelter rules, particularly safety rules.
5. Begin the full range of shelter activities.

SHELTER ORGANIZATION

A. Have the skills and occupations of shelterees identified to organize permanent groups and teams.

1. Have shelterees fill out registration forms where pencils and paper are available. When time is important, have people put down only name, age, sex, occupation or special skills. More complete registration can be taken later. (See page 83, "Shelter Administration.")

2. If pencils and paper are not handy, make verbal requests for persons with specific skills and experience. Later, registration forms can be improvised.

3. Personal knowledge of shelterees will also help the manager to select the best person for each position.

4. For key posts, a brief interview with likely candidates is advisable.

B. At the same time, have a count taken of the total shelter population.

1. Have a count taken of special shelteree categories, such as children under six, seriously ill persons, etc.

2. Population census will be used to calculate the rationing of shelter supplies.

Core Staff

A. Determine the number of key deputies needed (if pre-appointed staff is not present).

1. The number of top shelter management personnel should be kept small (in a shelter of 1,000, about six including shelter manager and deputy manager). (See the organization charts on pages 44-49.)

B. **Select persons for core staff with skills and experience described in Table I, page 36.**

C. **Set up a succession of command in the event that the shelter manager is absent or is unable to continue his duties.**

1. Recommended order of succession is:

   a. Deputy shelter manager

   b. Deputy for operations

   c. Deputy for technical services

   d. Deputy for special services

   e. A group leader from the largest level of community grouping.

D. **Brief the core staff on their responsibilities and what problems to anticipate.**

1. Use core staff to help select team leaders in their areas of responsibility.

2. Have them help to delegate and supervise appropriate shelter operations and activities.

Task Teams

A. **Determine the numbers and kinds of task teams for each shelter based on shelter size and configuration.**

1. A task team is a group of people assigned to carry out specific operations for shelter survival and comfort.

2. Select the number of teams that will allow:

   a. All shelter tasks listed to be covered by a team.

   b. As many shelterees as possible to be given a task to do.

   c. Each team to be of a manageable size.

3. In multi-space shelters, each area or floor may require a full set of teams. (See Table II, pages 37-40.)

for task team descriptions for a 1,000-person shelter. In very large shelters, additional teams may be needed.

4. In small shelters, related task teams may be combined. (See Table III, page 41.)

5. Shelters with more than one sleeping shift will need task teams for each shift.

B. Assign team leaders and members on the basis of skills and experience. (See Table II, pages 37-40, for qualifications and sources.)

1. If the individuals assigned to a task during entry have performed satisfactorily, and if they are technically qualified, have them form the nucleus for that permanent team.

C. Brief team leaders (and, when possible, team members also) on their duties. Distribute any available guidance materials, such as prepared team cards or special manuals stocked in the shelter.

D. Set up channels of communication and coordination between task teams and management.

1. Task team heads are responsible for the organization and operation of their team.

2. The team members report directly to the team leader, who reports to the appropriate deputy manager.

Community Groups

A. Determine the appropriate number and types of community groups needed in the shelter.

1. Community groups are the shelter equivalent of neighborhoods, blocks, cliques, and families. They are essential for management control and for shelteree morale.

2. The number of groups will depend upon size and configuration of the shelter. The following groupings are approximate and should be adapted to each shelter size:

a. Department--1,000 to 1,250 persons

b. Division--200 to 300 persons

c. Section--40 to 70 persons

d. Unit--7 to 12 persons

3. See Table IV, pages 42-43, for details on the community groups; and Figures 2 through 7, pages 44-49, for sample organization charts.

B. Appoint leaders for the two largest levels of groups first, on the basis of the qualifications in Table IV, page 43.

1. With the exception of the unit, the manager should select community group leaders before organizing groups, if feasible.

2. Temporary appointments may have to be made in large shelters.

3. Males are generally recommended as leaders for the larger shelter groups, except among populations that are normally used to female leadership; e.g., schools, hospitals.

C. Brief leaders on how to divide groups and what their responsibilities are.

D. Have the shelter divided into appropriate sections.

1. Reassure shelterees that grouping will be adjusted to unite families and friends as soon as possible.

2. In large shelters, generally organize larger groupings first, then sections and units.

E. Subdivide sections into units or living groups of 7 to 12 shelterees.

1. This basic living group should be made up of families, friends, and people with common interests, wherever possible.

F. **Have a leader selected for each unit.**

1. If at all feasible, permit shelterees to select their own unit leader.

2. If shelterees cannot select a leader, the appointed section leader may select the unit heads.

G. **Assign specific shelter locations to all groups, so that each unit, section, and division will have its own areas to live in.**

H. **Establish channels of communication between community groups, core management staff, and task teams.**

I. **Have section heads brief unit leaders on their duties.**

1. Duties of unit heads include:

   a. Counseling, advising, and consoling shelterees.

   b. Conveying complaints and problems which he cannot solve to the section leaders.

   c. Distributing supplies to members of his unit.

   d. Other duties assigned by shelter leadership.

J. **Set up an advisory committee to represent the shelterees to management.**

1. This committee will explain shelteree problems and grievances to the shelter manager; help him evaluate group problems concerning order and morale, shelter schedule, and activities; and, in turn, explain management's position to the shelterees.

2. The committee should be small (not more than seven persons), composed of members elected by the shelter population plus one or two representatives of management.

Orientation and Registration

A. Hold a general orientation briefing for the entire shelter. Explain the shelter organization, including team and community divisions. Introduce core management staff and team and community leaders.

   1. In very large shelters or those with multiple spaces, a series of such meetings will be necessary.

B. See that all registration forms are completed, and the information tabulated and presented to the appropriate management staff member.

Table I
The Core Management Staff

	RESPONSIBILITIES	QUALIFICATIONS	SOURCES	WHEN SELECTED
SHELTER MANAGER	Over-all direction of shelter; responsibility for all decisions.	Previous management experience; stable personality.	Managers, superintendents, executives, and officials.	As soon as possible, preferably before shelter entry.
DEPUTY SHELTER MANAGER	Same as shelter manager.	Same as shelter manager.	Same as shelter manager.	In small shelters, may be delayed until rest of organization is formed.
DEPUTY FOR OPERATIONAL SERVICES[1]	Assumes responsibility for such tasks as food, water, sanitation, medical care.	Same as shelter manager.	Staff service heads and middle-level administrators.	As soon as possible.
DEPUTY FOR TECHNICAL SERVICES	Plans and oversees such tasks as radiological protection, communications, safety, maintenance, and supply.	Preferably engineering background; supervisory maintenance or construction experience.	Technical staff heads, engineers, etc.	As soon as possible.
DEPUTY FOR SPECIAL SERVICES[2]	Plans and implements shelter training program, recreational and religious activities and special services.	Background in training, educational or social work, plus some management experience.	Training and education personnel, social workers, etc.	After the entry phase.

[1] *Functions may be combined with those of Deputy for Technical Services and/or Deputy for Special Services in small shelters.*
[2] *In small shelters, the function of this Deputy may be taken over by a community group leader or other member of management staff.*

Table II
Task Teams

	DUTIES & RESPONSIBILITIES	SOURCES & QUALIFICATIONS	SIZE/COMPOSITION OF TEAM/ NUMBER OF SHIFTS	SELECTION PRIORITY
RADIOLOGICAL DEFENSE	Maintain protection against fallout by monitoring, decontaminating, increasing shielding, etc. Measure, record, and advise management on radiation, and indicate necessary actions.	Background in science, knowledge of electronic instrumentation, highly desirable. Scientists, science teachers, electrical repairmen, etc.	Size of team ranges from a minimum of 2 monitors per 300-person shelter to a minimum of 5 monitors for 500-person shelters. Monitoring is a continuous activity, requiring a team on duty around the clock.	Should be one of the earliest teams recruited; ideally, team should be pre-selected and pre-trained.
SUPPLY	Storage, security, inventory, and issuance of all shelter supplies.	Supply and parts distributors, warehouse supervisor, manager of a store.	Depends on nature and amount of supplies, location, and supply management procedures.	Immediately after entry, to begin inventorying of supplies.
TECHNICAL OPERATIONS, REPAIR, AND MAINTENANCE	Assess and repair damage to shelters, maintain operability of all shelter equipment, support the radiological team in augmenting shelter protection against fallout, and handle all repair contingencies.	Equipment maintenance and repair experience. Maintenance personnel, engineers, construction men, electricians, plumbers, and building superintendents. Supervisory background helpful.	Depends on complexity of shelter configuration and extent of auxiliary equipment.	Ideally, should be selected before shelter entry, in order to familiarize self with shelter facilities and equipment.
MEDICAL	Responsible for shelterees health, operation of sick bay, control of medical supplies, training shelterees in first-aid procedures.	Licensed physician, dentist, registered nurse, pharmacist, licensed veterinarian, practical nurse, trained medical corps, student of medicine or dentistry, trained first aider.	Depends on size and medical needs of the shelter. May need someone on duty at all times.	Immediately after entry, unless team and team head have been selected before entry.
FIRE	Prevent, detect, extinguish fires internal and external to the shelter; train team and other shelterees in fire prevention and fighting, conduct emergency fire drills.	Background in fire prevention or fire fighting. Volunteer firemen etc.	Team size dependent on shelter size and number of shelter areas to be monitored. A fire watch should be maintained in all parts of the shelter at all times. Team can probably use a large number of people on several shifts.	Fire team should be recruited almost immediately after people begin to arrive. Must immediately collect additional shelter fire-fighting equipment in the building and may have to fight fires started from weapon's effects.

Table II (continued)

	DUTIES & RESPONSIBILITIES	SOURCES & QUALIFICATIONS	SIZE/COMPOSITION OF TEAM/ NUMBER OF SHIFTS	SELECTION PRIORITY
SAFETY	Rescue persons trapped in shelter area; prepare, orient, and drill shelterees on emergency procedures in cooperation with other pertinent teams; support protective actions conducted by the radiological team.	Background in industrial safety, police work, emergency maintenance, or military experience. Plant safety engineers, safety personnel, etc.	Safety team size depends on shelter size and configuration. Rescue team is usually composed of 5 to 8 men.	Should be pre-trained, if possible, or selected as soon after entry as feasible.
COMMUNICATION	Set up and maintain communication equipment; monitor and record incoming and outgoing messages; transmit messages to appropriate shelter management.	If complex equipment is available, background in operation and repair of equipment desirable. Electronic technicians, ham operators, engineers, radio dispatchers. Stenographers, secretaries also needed.	Depends on communication capability and message load; must have person on duty at all times.	Select as soon as possible.
ADMINISTRATIVE	Maintain shelter records; conduct shelter registration; help collect private property; provide administrative support.	Experience in office management. Office managers, executive secretaries, corporate administrative assistants, secretaries.	No formal requirements for size or composition of team.	Should be selected before the shelteree registration.
WATER	Inventory, ration, tap, and purify; schedule, distribute, and monitor use of water.	If only OCD survival rations, no special qualifications other than good health. The team head should have supervisory experience. If additional building sources used, may need plumber or repair personnel to assist.	Depends on size of shelter, nature and amount of supplies.	After initial actions completed, but within a couple of hours of entry.
FOOD	Inventory and determine food rations, schedule.	If only OCD survival rations, supervisory experience and good health.	Depends on size, complexity of shelter, and nature of supplies.	Couple hours prior to first feeding.

Table II (continued)

	DUTIES & RESPONSIBILITIES	SOURCES & QUALIFICATIONS	SIZE/COMPOSITION OF TEAM/ NUMBER OF SHIFTS	SELECTION PRIORITY
SANITATION	Set up and maintain toilet facilities; collect and dispose of garbage and waste. Maintain shelter cleanliness, establish personal hygiene procedures. Coordinate with medical in preventive sanitation and body disposal.	Knowledge of preventive medicine and importance of sanitation; knowledge of building sanitation systems; supervisory skills. Sanitation engineer, hygiene teacher, plumbers, building custodian, etc.	Multiple shifts advised to rotate the responsibility of performing unpleasant duties. Team may be subdivided into toilet team, trash and garbage team, body disposal team, and personal hygiene team.	Early in the occupancy phase.
SECURITY	Direct shelteree movements on entry or exit; guard supplies; control outbreak of disorder; guard major offenders who are isolated from other shelterees.	Experience in control of large numbers of people. Police, MP, plant security officer, etc.	Depends on size of the shelter, the extent of actual or potential problems.	Traffic assistance will be needed immediately for shelter entry. Other members of the team should be selected as soon as possible.
NIGHT WATCH	Maintain order in the sleeping area; assist shelterees who require aid; monitor toilet facilities; keep watch for hazardous conditions such as fire; guard shelter supplies; report all serious problems to shelter management personnel.	Team head is member of management staff; team from mature and responsible adults on a rotation basis.	Usually 2 monitors for each 200 sleepers; time of each shift should not exceed 2 hours; number will depend upon emotional state of shelterees, supplies, and equipment to be monitored.	Selected before "lights out."
PSYCHOLOGICAL FIRST AID (In many shelters, may be combined with other special service team.)	To assist emotionally disabled people to return to normal functioning as quickly as possible and to help seriously disturbed to be more comfortable.	Ideally, should have previous training or experience in dealing with emotional problems. Also have adequate personal adjustment to the shelter situation. Psychiatrists, psychologists, social workers, vocational counselor, teachers, or shelter leaders.	As many qualified persons as are needed and available should be assigned to this team. First aid will be most effective if one person can be assigned to a single shelteree at a time.	The need for this team should be determined during the first day or two of occupancy.

Table II (continued)

	DUTIES & RESPONSIBILITIES	SOURCES & QUALIFICATIONS	SIZE/COMPOSITION OF TEAM/ NUMBER OF SHIFTS	SELECTION PRIORITY
TRAINING AND EDUCATION	Train shelterees for shelter survival and adjustment; teach basic management and technical skills necessary to carry out in-shelter tasks; ongoing education of school children; post-shelter preparation.	Background in teaching. Teachers, training directors, school administrators, etc.	Depends on size of shelter population. Training activity should be interspersed throughout the day.	Chosen as needed in the shelter.
SUPPORT SERVICES	Care for children, elderly, and infirm.	Child-care team should be composed mainly of females with child-care experience; for care of elderly, use mature persons.	No formal requirements; continuous care may be necessary in specific cases. Use as many people as possible.	Set up as needed.
RECREATIONAL ACTIVITY	Plan and implement activities programs; e.g., arts and crafts, spectator entertainment, reading activities, etc. Allocate available recreation material, and improvise additional materials.	Experience in planning and guiding recreational activities; e.g., counselors for youth groups, community welfare center personnel, playground supervisors and workers.	Depends on size of shelter population, especially the number of children, the amount and type of recreation material, space available for this activity, and shelter temperature.	Set up as needed.
RELIGIOUS SERVICES	Organize and conduct religious services; console and comfort shelterees.	Member of the clergy or religious laymen.	Composition should conform to the distribution of religious affiliations among the shelter population.	Set up as needed.

Table III
Suggested Combination of Task Teams for a Small Shelter (Approximately 100 Persons or Less) in Order of Priority

1. Radiological Defense
2. Supplies, Repair, and Maintenance
3. Fire, Safety, Rescue, and Security
4. Medical and Sanitation
5. Communication and Administration
6. Food and Water
7. Training, Recreation, Religion, and other Support Services

Table IV
Community Groups

	DUTIES & RESPONSIBILITIES OF LEADER	SIZE & ORGANIZATION OF GROUP	WHEN TO ESTABLISH GROUP	SELECTION OF LEADER	ASSIGNMENT OF SHELTEREES TO GROUP
UNIT	Maintains order and control of group; counsels, advises, and consoles individual shelterees; conveys complaints and problems to the section head; carries out duties assigned him by the section head.	Seven to 12 persons – dependent upon natural grouping of shelterees and size of shelter.	After other groups have been established and leaders appointed.	Should be chosen by unit members, unless they are children or other dependent types.	On the basis of kinship, friendship, and common interests.
SECTION	Has direct operational supervision over group; insures provision of food, water, sleep arrangements, etc.; maintains sanitary standards; supervises shelteree participation in training, social-recreational activities; supervises service activities; maintains communication between shelterees and management; maintains order.	Between 40 and 60 persons – not so large that leader cannot know all members or observe their behavior.	Established first if shelter is small, otherwise, same time as division.	Pre-selected or appointed by division leader prior to community grouping. If all section members know one another, may be selected by them.	On the basis of entry order, or as a result of splitting up already formed divisions. Reassignment should be permitted for reuniting family, friends, relatives, etc.

Table IV (Continued)

	DUTIES & RESPONSIBILITIES OF LEADER	SIZE & ORGANIZATION OF GROUP	WHEN TO ESTABLISH GROUP	SELECTION OF LEADER	ASSIGNMENT OF SHELTEREES TO GROUP
DIVISION	Generally responsible for well being of division members; delegates direct responsibility to subordinate section heads; plans activities and use of resources; reports directly to core management.	200 to 300 persons – dependent on shelter size and configuration.	Should be first group established if shelter is large and trained leadership exists.	Selected prior to shelter occupancy or appointed by management prior to division formation (based on knowledge of person's qualifications).	Based on time of entry, or formation prior to shelter entry. Reassignments should take place as necessary.
DEPARTMENT	Exercises command/control over all divisions and sections in his jurisdiction. In many cases, departments may function with almost complete autonomy in regard to daily activities.	1,000 to 1,500. Normally consists of from 4 to 6 divisions.	Should be established as soon as possible.	Same as division leader – should be provided with same training as shelter manager.	Based on time of entry or formation prior to entry.
ADVISORY COMMITTEE	Acts as liaison between shelterees and the shelter manager to present shelteree problems and suggestions to the manager; assists management in evaluating and resolving group and individual problems.	For effective cooperation, committee should not have more than 7 members. Should meet at a specified time each day, with provision for emergency sessions at any time.	Should be selected whenever shelterees are familiar enough with each other to be able to elect committee (either late in initial organization or early in routine phase).	By election of the committee members.	Elected by shelterees, plus appointment of 1 or 2 management representatives.

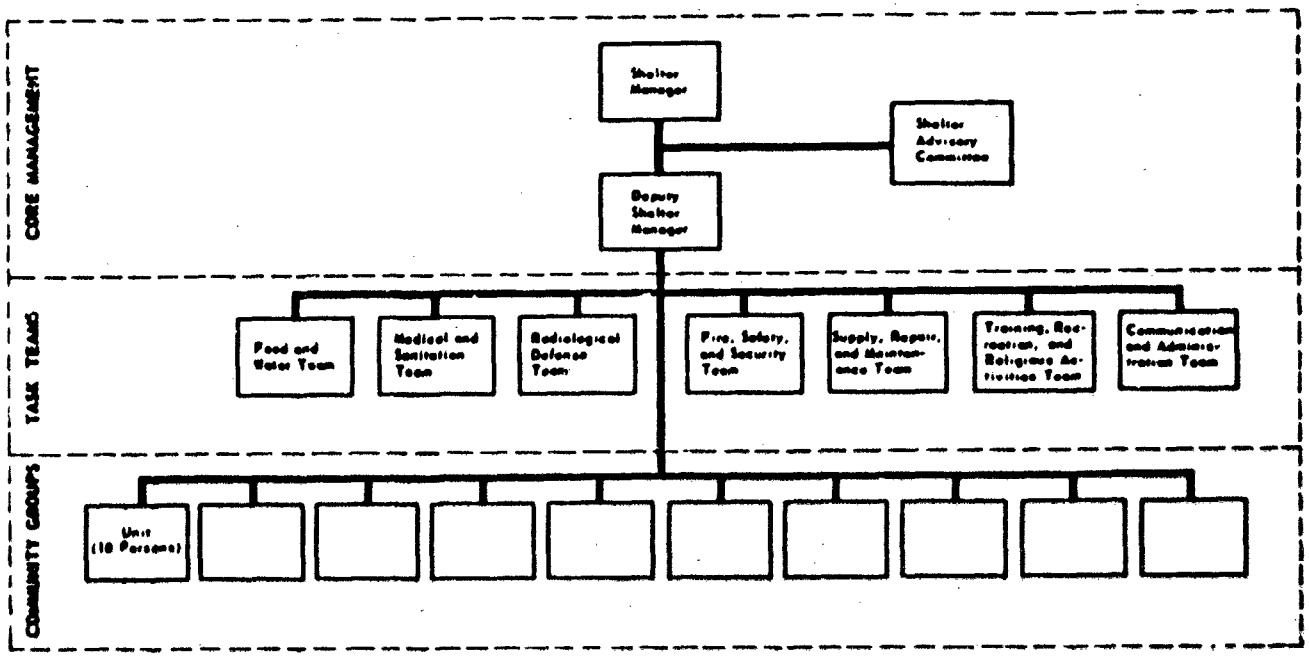


Figure 2. Sample Organization of a 100-Person Shelter

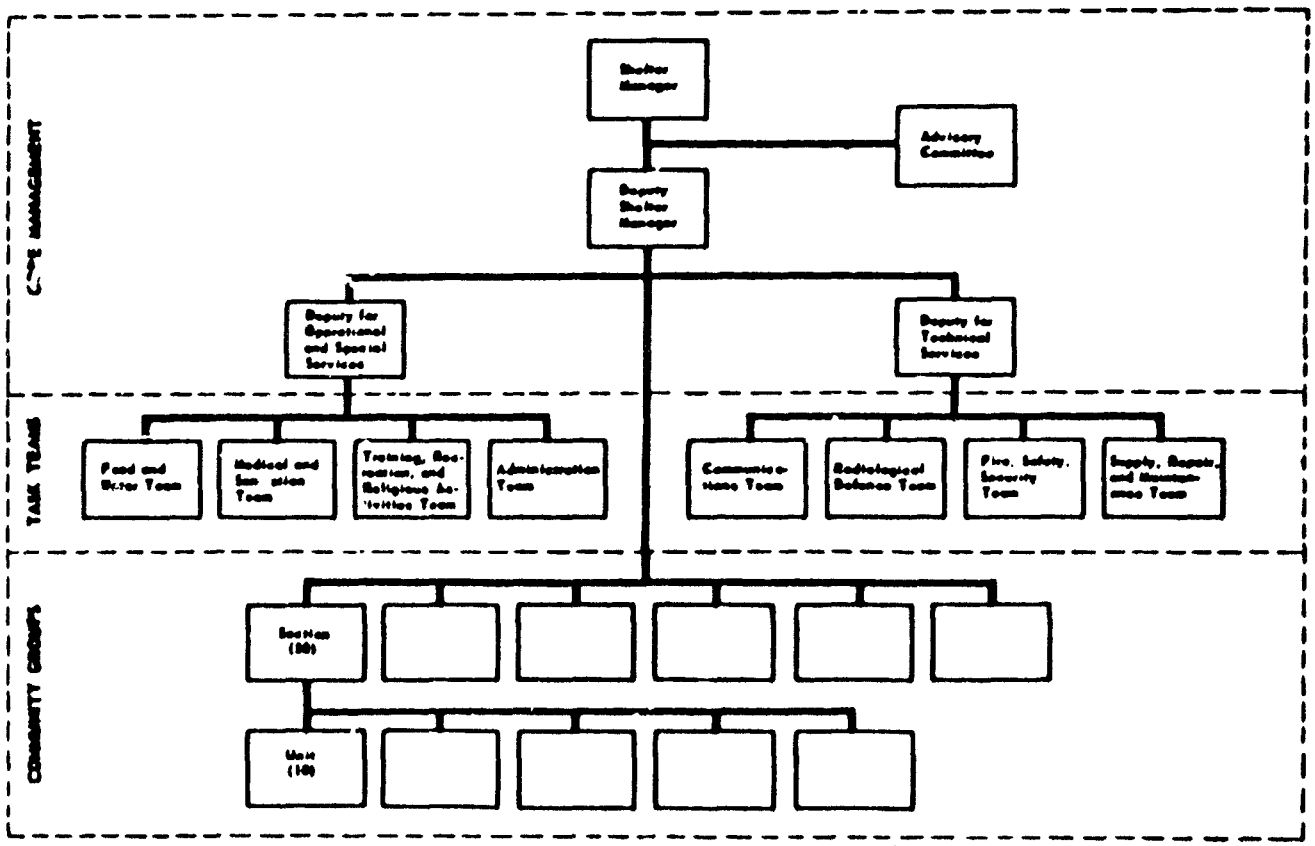


Figure 3. Sample Organization of a 300-Person Shelter

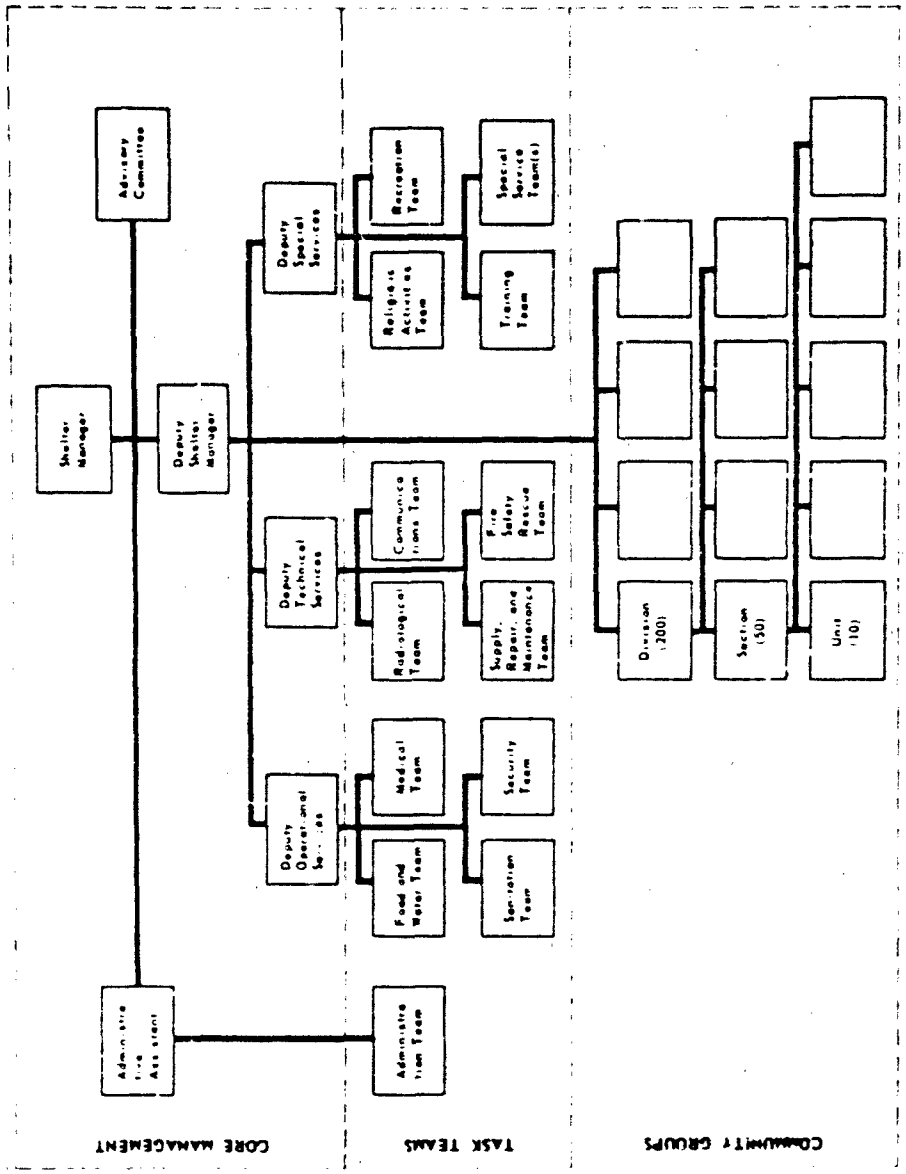


Figure 4. Sample Organization of an 800-Person Shelter

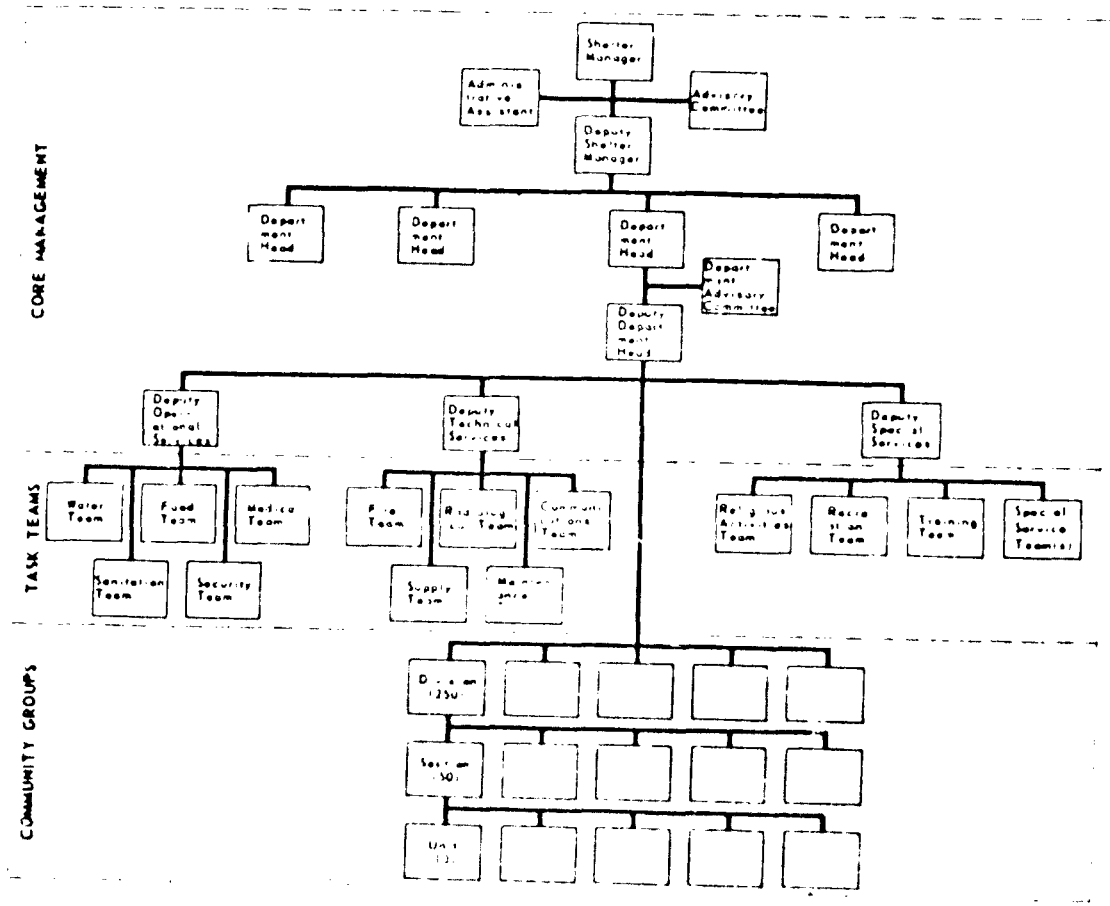


Figure 5. Sample Organization of a 1,500-Person Shelter

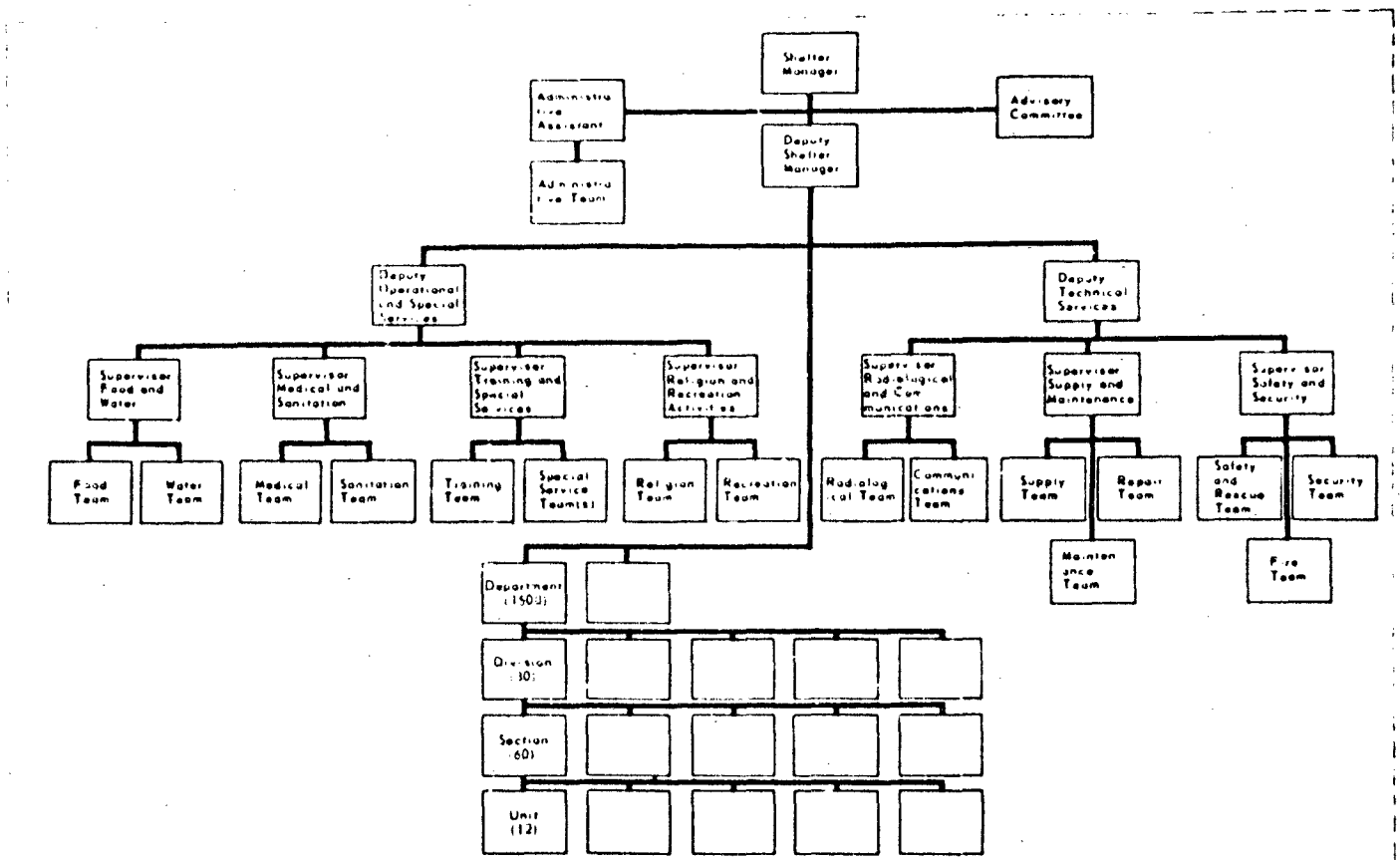


Figure 6. Sample Organization of a 5,000-Person Shelter

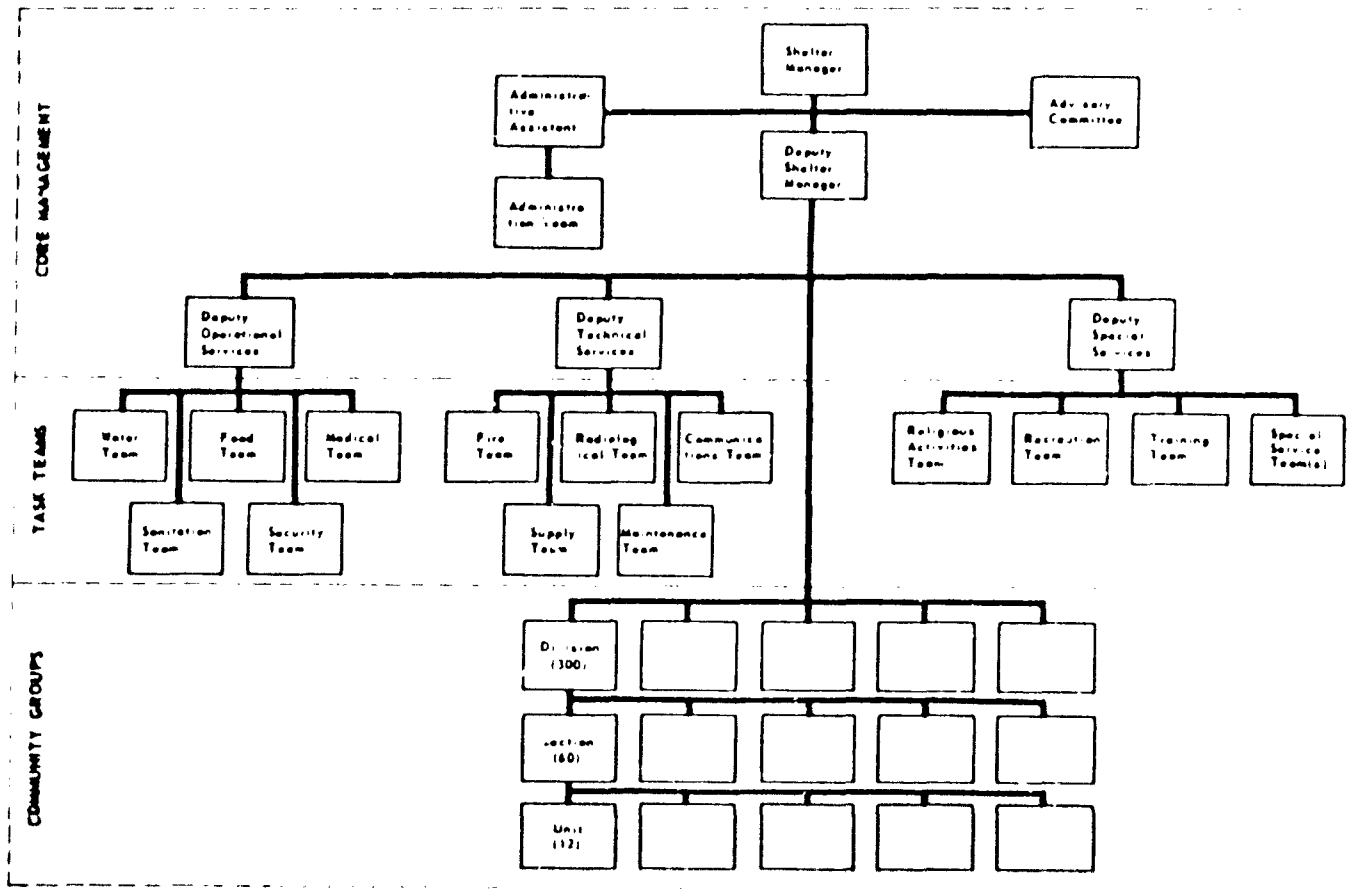


Figure 7. Alternative Organization of a 5,000-Person Shelter (department head functions as submanager, with responsibility for both community groups and task teams)

RADIOLOGICAL PROTECTION

Team Selection

A. **Appoint a radiological defense (RADEF) team and team head, if a trained team is not present in the shelter.**

1. RADEF personnel may be chosen from scientific or technical people. (See Table II, page 37, for details.)

2. Duties of the RADEF team include:

   a. Monitoring and reporting radiation levels within the shelter and on emergency missions.

   b. Taking protective actions against fallout.

   c. Decontamination, where necessary.

3. The team must be large enough to avoid excessive radiation exposure beyond the maximum permissible limits for team members.

   a. Minimal numbers of monitors recommended are two for shelters of 300 or less, or five for shelters of 500 or more.

4. If possible under emergency conditions, total emergency radiation exposure should be kept below 200 Roentgens during the first month of operations.

Monitoring

A. **Set up a map showing the parts of the shelter which should be monitored regularly.**

1. Areas to be monitored include shelter openings, ventilation outlets, etc.

2. Monitoring records should include changes in radiation levels, as well as the accumulated dose in these monitored areas.

9. Have persons who enter after the arrival of fallout visually inspected for the presence of fallout. Also inspect incoming food, water, and equipment.

Decontamination

A. If inspection of food and water reveals presence of fallout particles, see to it that simple decontamination procedures are implemented.

1. Food decontamination.
   a. Treat fallout on food the same as any grit or sand. Remove as many of the particles as possible before eating food.
   b. Serve uncontaminated food first, but do not deny food to shelterees only because it may be contaminated.
   c. Remind shelterees that the food is not dangerous.
2. Water decontamination.
   a. If inspection shows particles in water, either:
      (1) Filter water through paper towels or layers of fine cloth, or
      (2) Allow water to stand until fallout settles to bottom.

      NOTE: Boiling or chlorination will <u>NOT</u> remove contamination.
   b. Serve uncontaminated water first, BUT DO NOT DENY WATER TO SHELTEREES ONLY BECAUSE IT MAY BE CONTAMINATED.
   c. Remind shelterees that the water is not dangerous.

B. Decontaminate a large shelter area only if there is danger to shelterees, or if the shelter space is needed. If possible, simply isolate the area.

1. Fallout particles that penetrate a shelter opening should be removed the most direct way possible, such as sweeping to the outside, brushing, hosing, etc.

Protective Actions

A. For maximum protection against fallout, try to locate shelterees in areas with dose rates below two Roentgens per hour for at least the first 24 to 48 hours of the shelter stay, even if crowding is necessary.

B. Rotate shelterees in areas of highest and lowest protection if a difference of ten Roentgens exists between highest and lowest exposure doses.

1. Highest protection should be considered for pregnant women, children under 18 years, and personnel assigned to early emergency operations.

C. Have all dangerous radiation levels and hot spots reported immediately. In the event that the radiation rate exceeds ten Roentgens per hour or 75 Roentgens in 48 hours, consider taking action to locate better protection for the population.

1. If possible, increase shielding by piling up dense items between shelterees and source of radiation.

2. Relocate shelterees in safer areas.

3. Rope off areas that cannot be shielded.

D. If radiation readings cannot be made, locate shelterees in the following areas:

1. In an underground shelter, next to walls which are deepest below ground level.

2. Two stories above ground level, in the center core of buildings at least two stories below the roof and roofs of other buildings, and away from windows and other openings.

Radiation Records

A. Have records kept of actual or estimated cumulative dose rate of shelterees.

1. In small shelters, it may be possible to keep records

for all shelterees. In large shelters, keep individual records only for special purposes (e.g., emergency mission team).

2. The CDV-742 dosimeter will record the accumulated exposure dose that an individual has received. Instructions for use will be found with the instrument.

Shelteree Orientation

A. **Inform shelterees of the external radiation levels, the shelter's protection capability, and the general rules and procedures for radiological operations.**

1. Shielding of the shelter (physical and distance) provides enough protection, under most conditions, for survival. The reason that shelterees can leave the protection of the shelter after a certain period of time is that radioactive particles lose their radioactivity at a given rate of time (known as decay rate).

2. The decay rate may be estimated by a rough approximation known as the "7/10" rule. Provided that fallout is completely down, the total intensity from fallout radiation will decrease ten times for every sevenfold increase in time after a nuclear blast. For example, if all fallout had accumulated, and if the radiation dose rate had been 300 Roentgens per hour (300 R/hr) one hour after blast, it would decrease to about 30 R/hr seven hours after the explosion. In approximately two days after the blast (7 x 7 hours), the rate would be about 3 R/hr; and in approximately two weeks (49 x 7 hours), the rate would be reduced to about .3 R/hr.

B. **Inform and reassure shelterees that radiation and radiation sickness are not contagious. Once radioactive particles have been shielded or removed by appropriate methods, the exposure to radiation will be removed.**

Calculation of Stay

A. **Have RADEF team head calculate exit time on the basis of available information on radiation levels. From these calculations, determine: (1) estimated duration of stay, and (2) possibility of temporary emergence.**

1. The factors to be considered are:

   a. Outside radiation level, calculated from instrument readings, decay charts, or confirmed by external communications from local control centers or other sources.

   b. The age of the fallout. (See Table V, page 55.)

   c. Average or specific cumulative dose of the shelterees, determined from dosimeter readings.

   d. Urgency of mission or exit.

   e. Allowable dose. (See Table V, page 55.)

   f. Time required to complete mission.

2. If communication is available, check with the local control center before leaving the shelter. If no communication is available and outside levels are high (above a few R/hr), keep people inside the shelter as long as you can.

Table V
Suggested Limits for Shelter Exit
(Use as a last-resort guide)

IF INTENSITY (IN R/HR) HAS FALLEN TO:	RECOMMENDATIONS
Less than 0.5	No special precautions necessary, except to sleep in the shelter.
0.5 to 2	Outdoor activity (up to a few hours per day) tolerable for essential purposes. Eating, sleeping, and all other activities to be conducted in the best available shelter.
2 to 10	Very short periods (less than an hour per day) of outdoor activity tolerable for the most essential purposes. Rotate outdoor tasks to minimize total doses. Rescue, repair, communication, and exercise may take place in less than optimum shelter.
10 to 100	Time outside of shelter limited to a few minutes and to those activities that cannot be postponed for at least one more day. Insofar as possible, locate all people in the best available shelter, no matter how uncomfortable.
Greater than 100	Outdoor activity of more than a few minutes may result in sickness or death. Move only for: (1) risk of death or serious injury in present shelter from fire, collapse, thirst, etc.; (2) risk of fatal dose of radiation with better shelter only minutes away.

In planning permissible exit activities, based on this table, it is important to take into account the age of the fallout. If, for example, an external reading of 2 R/hr was obtained after one day in the shelter, it would mean that the total radiation exposure of the shelterees would be much less than if a reading of 2 R/hr was initially obtained only after a week in the shelter. Consequently, in the former instance, the rules for permissible external activities can be relaxed somewhat; whereas, in the latter case, they should be made more stringent.

SUPPLY MANAGEMENT

Team Selection

A. **Appoint a supply team and team head.**

1. Experience in supply or parts distribution, store management, or military quartermaster service will be an asset. (See Table II, page 37.)

2. Team members must be in good physical condition to lift and carry stocks.

3. Duties and responsibilities of the team include storage, security, inventory, issuance, and record keeping of all shelter supplies.

4. Size and composition of the team will depend upon the nature and amount of supplies in the shelter, the location of these supplies, and the distribution procedures adopted.

Personal Property

A. **Have a survey made of personal belongings, and ask people to volunteer all items which will be useful for group survival. Stress that such items will be used for everyone's benefit.**

1. A partial list of useful items includes pocket knives, nail clips, files, pens, pencils, writing pads, cosmetics (which can be used for improvised writing material), penlights, non-prescription medicines, hairpins, clips, tie clips, portable radios, lighters, matches, handkerchiefs, scarfs, belts, ties, paperback books, food, and blankets.

2. Weapons and other potentially dangerous articles should also be requested from shelterees for use in the common protection of the shelterees.

3. Collection of these possessions might best be carried out within the unit or section after a direct request for items from the shelter manager.

4. Records of personal belongings should be entered on the shelteree registration form, particularly those items that will be returned to the owner after the shelter stay is over.

Inventory, Location, and Distribution of Supplies

A. Have an initial inventory of ALL shelter resources taken and recorded.

1. Inventory data will be used to ration supplies. Initial calculations should be estimated on the basis of a two-week shelter stay.

2. A projection of how long different supply items will last should be given to the manager.

3. A careful record of supply use must be continually maintained.

B. Select and implement a system for distribution of supplies.

1. For many shelters, the following is an efficient approach. Supplies will be centrally stored and distributed by the supply team to task teams. The task team will carry the materials to its own location in the shelter and dispense it to appropriate individuals or groups of shelterees according to the shelter plan.

   a. Each task team will keep records of its own supplies. The supply team will maintain inventory control over all the shelter resources as a whole.

2. Centralized supply management. The shelter resources will be located in one major area of the shelter, under the supervision of the supply team. Supplies will be issued to the appropriate group and team leaders or individual shelterees, and records of distribution will be kept.

   a. This approach is recommended generally when:

      (1) The shelter is small, occupying a single space or several contiguous areas where floor space is at a premium.

(2) All supplies have been stacked in a single shelter location before occupancy.

(3) Supplies are largely OCD stock.

3. Decentralized supply management. Supplies dealing with each specific task are placed in a separate location under responsibility of the appropriate task team (for example, food with the food team). Community group leaders or authorized individuals pick up supplies from the task team.

a. Each task team head is responsible for providing up-to-date information on the status of his resources.

b. This approach is recommended only under the following conditions:

(1) The shelter contains separate rooms or areas that have been planned and equipped for use by specific task teams.

(2) Supplies must be prepared before they can be used; for example, food toppings.

C. See to it that supplies are located or relocated in the shelter according to the selected plan.

1. Space for personal property should also be available in the supply area(s).

D. Supervise the efficient distribution of supplies according to established rationing procedures.

1. Have records kept on the kind and amount of supplies allocated and who receives them.

2. A master summary of the shelter supply status should be kept up-to-date. (See page 164 for sample supply form.)

Use of Supplies

A. Set up procedures to control the use of non-expendable items.

1. Items that are not used up in operation, such as tools, must be locatable at all times.

Shelterees should sign these items out whenever they are used.

2. Only authorized personnel should be permitted to use non-expendables.

B. Explain supply procedures to shelterees.

C. Encourage dual-purpose use of all supplies.

1. For example, cartons may be used as follows:

   a. Filled cartons can be employed as building materials to build temporary barriers to separate management, medical, and sanitation areas.

   b. Large numbers of filled cartons stacked together may have enough density to provide some radiation protection.

   c. Cardboard and empty cartons placed over metal water drums make a seat or table or even sleeping space.

   d. Empty cardboard cartons and metal food containers can be used to collect and store all kinds of objects, from garbage to personal belongings.

TECHNICAL OPERATIONS, REPAIR, AND MAINTENANCE

This covers the technical operations associated with atmosphere control, lighting, and power.

A. Appoint a repair and maintenance team and team head for atmosphere control, lighting, and power operations as well as shelter repair and maintenance.

1. Technical experience in maintenance and repair of types of equipment located in the shelter is highly desirable.

2. Sources will include maintenance men, engineers, construction men, electricians, plumbers, building superintendents, etc.

3. Responsibilities will be to assess and repair structural damage to the shelter, maintain operability of all essential shelter equipment, support the radiological team in augmenting shelter protection against fallout, and handle all repair contingencies.

CONTINGENCY

If equipment fails, see page 148.

ATMOSPHERE CONTROL

A. **Assess ventilation conditions in setting up shelter activities.**

1. Parts of the shelter that should be well ventilated include:
   a. Toilet areas.
   b. Medical areas.
   c. Kitchen areas, if foods are being cooked.

Temperature

A. **Anticipate the occurrence of temperature extremes, and be aware of their effects on shelterees.**

1. Temperature will vary according to:
   a. The temperature of air being drawn into the shelter.
   b. The combined amounts of body heat each person will give off.
   c. Heat from hot plates, heating units, shelter machinery, etc.
2. "Effective temperature" is a composite measure of temperature, humidity, and air movement, useful in evaluating the suitability and comfort of the atmospheric environment.
3. Effects of temperature extremes in-shelter will be roughly as follows:
   a. Sixty-eight to 72° Fahrenheit effective temperature is the optimum range for habitability. Most people will tolerate effective temperatures in the range of 78-85°F. for an extended period of time.
   b. Eighty-five degrees F. is considered maximum tolerable effective temperature for long exposures. Heat-stress reactions will seriously affect shelteree performance. Reactions include nausea, dizziness, pain, and a substantial increase in the need for drinking water.

c. Fifty degrees F. will be the lowest temperature acceptable for continuous exposure with adequate food and clothing. Manual dexterity will be affected.

B. **Use available means to detect temperature extremes.**

1. A wet-bulb, dry-bulb thermometer system can be used to derive effective temperature. It is not presently stocked under the Federal shelter stocking program.

2. In the absence of instruments, an alternative method is to check the body temperatures of approximately ten per cent of the population (two per cent in large shelters) with the thermometer in the medical kit, if the temperature seems to be reaching dangerous extremes.

   a. If the average rise in the body temperatures of the sample approaches about two degrees Fahrenheit above normal, take remedial actions for high temperatures.

   b. Correspondingly, lower body temperatures of two degrees will indicate the need for remedial actions in cold shelters.

C. **Control high temperatures in naturally ventilated shelters (which have no ventilation equipment) by reducing the output of heat and by trying to bring in more fresh air.**

1. Open windows, doors, etc., where feasible.

2. Restrict heat- and humidity-producing elements by:

   a. Greatly reducing physical activity.

   b. Avoiding heat-producing appliances.

3. If temperature differences within the shelter are very distinct, rotate living groups to give relief from continuous discomfort.

D. **If mechanical ventilation equipment is available, control high temperatures by increasing the quantities of fresh air brought into the shelter or by using air-conditioning equipment.**

1. All of the above procedures for natural ventilation can be used to supplement mechanical ventilation.

2. Problems with mechanical ventilation may be:

   a. Loss of power or equipment failure may create serious problems if the equipment cannot be repaired.

   b. Temperature variation between cool areas around the intake and hot areas at the exhaust may cause dissatisfaction unless shelterees can be rotated.

E. **Control low temperatures by whatever means can be improvised in a naturally ventilated shelter, including:**

   1. Increasing physical activity.

   2. Crowding shelterees together.

   3. Improvising covers from newspapers, cardboard, and any other materials.

   4. Serving hot beverages and food.

F. **Control low temperature extremes with heating equipment, if available.**

   1. Heaters may be present in shelters or in the buildings which can be used in cold environments.

   2. Problems in use of equipment may be:

      a. Power requirements for electric equipment.

      b. Ventilation problems created by gas heaters.

      WARNING: Avoid using unvented or open-flame heating appliances.

Atmosphere Composition

A. **Know the requirements for a livable atmosphere and anticipate the cause and effect of shelter air problems.**

   1. A normal life-sustaining atmosphere contains approximately 21 per cent of oxygen

by volume and 0.02 to 0.04 per cent of carbon dioxide. Toxic or noxious components, such as carbon monoxide, are found in very minute quantity, if at all.

2. When carbon dioxide rises and/or oxygen drops below certain levels, physiological symptoms will begin to occur. Even if oxygen remains high, an excess of carbon dioxide may become harmful.

3. Causes of oxygen and carbon dioxide problems include:

   a. Inadequate fresh air--where the oxygen is used up faster than it is replaced and exhaled carbon dioxide builds up beyond healthy limits.

   b. Open flames, engine exhaust, and cigarette smoke.

4. Carbon monoxide is given off by engine exhaust fumes, tobacco smoke, or open flames. It is deadly in very minor quantities and may be a problem wherever ventilation or exhaust is inadequate.

B. Recognize the effects of atmosphere imbalance.

1. Symptoms of oxygen deficiency are similar to alcoholic intoxication: vision problems, slowed reaction time, impaired memory and insight. As the deficiency increases, shelterees will become irrational and boisterous; fingernails and lips will turn blue; dizziness and deeper, more rapid breathing will occur.

2. If carbon dioxide rate rises considerably, symptoms will include deeper and faster breathing (becoming increasingly labored), nausea, and finally inability to coordinate and unconsciousness.

3. Symptoms of carbon monoxide are flushed skin, dizziness, lack of strength, poor balance, fainting, and mental confusion. Unconsciousness and death can result very quickly.

C. **Use any available means to detect atmosphere imbalances.**

1. Without equipment, imbalances will be difficult to detect because symptoms will be similar to those caused by other stresses and physiological deprivation. In the case of atmosphere imbalance, a general disturbance will occur among shelterees instead of isolated symptoms. For instance, suspect atmosphere problems if:

   a. Several people faint.

   b. Those located near a fresh-air intake seem to be in better condition than those closest to the exhaust.

2. Monitoring equipment, such as an oxygen meter and a carbon dioxide detector, should be used where available. They are not stocked.

3. Detection of carbon monoxide is quite difficult without a detector because it is colorless, odorless, and tasteless.

D. **Control the atmosphere balance in a naturally ventilated shelter by: (1) limiting shelter activities, (2) bringing in additional air, and (3) avoiding the production of carbon dioxide and carbon monoxide.**

1. Reduce shelteree activity.

2. Increase air supply by opening windows, doors, etc., where feasible.

3. Prohibit use of unvented engines and open flames.

4. Control smoking.

5. Other common substances may be dangerous in closed, poorly vented shelters, such as cleaning agents, solvents, degreasers, carbon dioxide refrigerants, pressurized dispensers, broken mercury thermometers, and some types of fire extinguishers.

E. Control the atmosphere balance in mechanically ventilated shelters by increasing the intake of fresh air.

1. Any type of mechanical equipment will generally be able to bring in enough fresh air for shelter safety, from the standpoint of atmosphere balance.

2. Problems of mechanical ventilation are listed on page 63.

Odors

A. Be aware of the problems of odors.

1. Odors may initially cause loss of appetite, nausea, and irritability, particularly if they result from sanitation problems, injuries, or death; however, shelterees will be able to adapt after a few hours.
   a. Control disagreeable odors without mechanical ventilation by:
      (1) Sealing bodily waste in containers and disposing of them as soon as radiation allows.
      (2) Covering and removing bodies from the shelter as quickly as possible.
   b. In mechanically ventilated shelters:
      (1) An exchange of air should help to control odors.
      (2) Exhaust fans located in toilet and medical areas will also draw off some of the odors.

LIGHTING

A. Have a survey conducted on the location, amount, types, and expected life of available lighting.

1. Additional lighting equipment for shelters may include:
   a. Battery-powered lighting for minimum use in emergencies, such as flashlights, pen-lights, or dry-cell batteries.
   b. Non-electrical facilities, such as kerosene lamps, candles, etc.

      WARNING: Use open flames only as a last resort, because they may create serious ventilation and fire hazards.

B. Control lighting for various shelter activities and to maintain diurnal cycle (daytime-nighttime distinction).

1. If shelter is dependent upon battery-powered devices, keep lights at minimum acceptable levels to extend life of power sources.

2. If there are no controls for varying the light intensity, shade and/or unscrew the bulbs to control illumination.

C. In anticipation of inadequate lighting or failure of the lighting system, prepare procedures for operating the shelter under minimum illumination conditions.

1. Maintain essential operations, if possible, until radiation levels permit movement to other shelter areas. Many operations can be carried out effectively under surprisingly poor illumination conditions.

2. Natural light coming into the shelter during daylight hours may allow many shelters to remain habitable for an extended period of time.

3. Management personnel should continually reassure shelterees to minimize the likelihood of panic reactions.

4. The number of watch and monitoring personnel will have to be increased.

5. In the absence of other light sources, the light from the dosimeter charger (stocked with the radiological equipment) will be sufficient to read instructions and perform many tasks.

POWER

Refer to the following guidelines only if the shelter has auxiliary power equipment.

A. Be aware of the types of auxiliary power equipment found in the shelter and problems in their use.

1. Motor-driven generators run by diesel or gasoline provide the greatest capability, but have the following potential problems:
   a. Exhaust: Beware of possible carbon monoxide from a faulty exhaust system.
   b. Heat: Internal combustion engines generate large amounts of heat, which may significantly raise the temperature and humidity in the shelter.
   c. Fuel: The amount of fuel will not only limit the amount of emergency power which can be produced, but it can also be a potential fire hazard.
   d. Location: A generator may be located in radioactive or "hot" areas, making it difficult for maintenance personnel to make repairs.
   e. Noise: Some generators may create a very high noise level which can disturb shelter activities and sleep.
2. Battery power supplies have fewer problems, but more limitations:
   a. Limited power: Batteries cannot be used continually for total emergency power because they require frequent recovery periods.
   b. Heavy equipment cannot be operated unless high-current storage batteries and battery-adapting machinery are used.
   c. Lighting will be a problem unless lights are especially adapted for operating on batteries.
3. Manual generators and equipment can be used to supply power for low-level lighting and

ventilation with few of the problems already mentioned.

B. Have estimates made of how long emergency power equipment can be operated without replenishing the fuel supply or batteries.

1. Conserve power by shutting off the power intermittently, as shelter conditions permit.

C. Establish a power-utilization schedule based not only on fuel consumption but also on the effects of heat output on shelter temperature.

CONTINGENCY
If equipment fails, see page 148.

MEDICAL CARE

Team Selection

A. Appoint a medical team and team head.

1. If a licensed physician is not available to head the medical team, appoint the most qualified person from among the following sources: dentist, registered nurse, pharmacist, licensed practical nurse, trained medical corpsman, students of medicine or dentistry, or a trained first aider. (See Table II, page 37.)

2. Medical aides may be needed to help care for the sick. Experience in first aid and nursing will be helpful.

3. The team size will depend upon the number of sick and injured.

Supplies

A. Assign a responsible person to inventory all medical supplies.

B. Have medical supplies rationed according to the best estimate that the medical team can make as to expected need.

1. Medical supplies should be distributed only to the appropriate medical people.

2. A detailed medical log should be kept for all medicine dispensed.

3. Supplies should be locked. If this is not possible, someone should monitor the medical supplies at all times.

Medical Facilities

A. Set up one or more medical treatment areas, where patients' ailments can be diagnosed and treated.

B. Establish a special sick bay (a hospital-like area) if there are persons with communicable diseases, serious ailments, or injuries that require isolation from the rest of the shelter.

1. A sick bay will not be effective if:

   a. A large proportion of the shelter population is ill.

   b. The shelter is a small, single area with little isolation possible.

C. Schedule sick call daily.

1. In large shelters, more than one sick-call period a day may be needed, and more than one location for the sick call may be necessary. In a small shelter, medical care may be on an informal, when-needed basis.

Diagnosis and Treatment

A. Supervise the diagnosis and treatment of shelterees, particularly if the medical team head is not a physician.

1. Diagnosis and treatment guidelines can be found in the stocked medical care booklet. Federally provided supplies are intended only for first aid and treatment of minor ailments.

2. Priorities for treatment must be established on the basis of first treating those whose chances for survival will be most increased by care and drugs.

3. Medical rounds, where the medical team circulates through the shelter to diagnose and treat cases, may be advisable under the following conditions:

   a. If there is no sick bay but a number of patients who would be unable to walk to sick call.

   b. If a shelter is very crowded.

   c. In large shelters, if many people have extensive minor illnesses.

4. Three rules for dispensing medication are:

   a. Give only the immediate dosage.

   b. Insist that medicine be taken at the time it is dispensed.

c. Keep a record of all medications administered.

5. Have medical team keep a log of illness and injuries.

B. Provide care for shelterees who are suffering from effects of radiation sickness.

1. Radiation sickness is not contagious. As soon as the sources of radioactivity are removed, there will be no further exposure. The degree of sickness depends upon the total amount of exposure and the time period over which the exposure took place. In general, the larger the radiation dose within a short time, the more severe the symptoms will be.

2. Diagnosis will be difficult because the first symptoms only last for a day and are similar to many common illnesses and emotional reactions.

3. The following information will indicate some of the symptoms which can be expected for various ranges of radiation exposure:

a. 0 to 200 Roentgens	No obvious effects for 50 per cent of population. Mild nausea and vomiting lasting one to two days for those who received 150-200 R. Once stomach is emptied, symptoms should disappear if the victim does not eat for awhile.
b. 200 to 1,000 Roentgens	Damage to blood-forming system, resulting in minor illness to death. Initial nausea and vomiting for day or two. After latent period lasting from several days to a few weeks, secondary effects appear: malaise, fatigue, fever, diarrhea, bleeding, etc. Generally, the earlier the onset of symptoms, the higher the exposure

		has been. For those who survive, recovery will be lengthy.
c.	1,000 to 5,000 Roentgens	Rapid onset of symptoms. Severe diarrhea and vomiting and death within a few weeks.
d.	Over 5,000 Roentgens	Death within hours.

4. Symptomatic treatment is all that can be given to victims of radiation sickness in-shelter.

D. Help prevent the occurrence and spread of illness in the shelter by maintaining high sanitary standards, particularly in food and water handling, waste disposal, and care of contagious diseases.

CONTINGENCY

In the event of death in the shelter, turn to page 150.

FIRE PROTECTION

CONTINGENCY
In the event of fire, see page 146.

Team Selection

A. Appoint a fire team and team head.

1. Background in fire prevention, fire fighting, or industrial safety is desirable. (for further details, see Table II, page 57.)

2. Duties include prevention of fires, detection of fires as soon as they start, control and suppression of fire, training fire team, and conducting emergency drills.

3. Size and composition of the fire team will depend on the size of the shelter and the number of shelter areas to be monitored. The fire team may be combined with the safety team in small shelters.

Prevention and Detection

A. Be aware of the effects of fire in a shelter.

1. Flame damage, smoke, toxic fumes, and depletion of oxygen may become serious enough to require shelter evacuation.

B. Set up procedures to prevent and detect fires.

1. Fire may be caused by the effects of weapons or by hazards within the shelter (smoking, open flames, over-heated motors, or flammable elements).

2. The shelter should be inspected for flammable materials, such as old papers, oily rags, paints and solvents, etc. All flammable materials should be collected and carefully stored or disposed of.

3. A 24-hour fire watch should be set up. Assigned shelterees should monitor all parts of a shelter, particularly shelter equipment, wiring, and any special equipment such as oxygen or carbon dioxide containers. See that smoking is limited to specific locations and that cigarette butts are placed in special metal containers.

C. Instruct shelterees in rules for fire prevention and control.

D. Conduct emergency drills for shelterees regularly.

SAFETY

Team Selection

A. Appoint a safety team and team head.

1. Qualifications for the safety team include background in industrial safety, police work, emergency maintenance or custodial work, or military experience. (See Table II, page 33.)

2. Responsibilities include cooperating with repair and maintenance team to rescue persons and to help repair structural damage to the shelter; marking shelter exits and keeping routes clear; preparing, orienting, and drilling shelterees on procedures for emergency situations; and supporting protective actions conducted by the radiological team.

3. In large shelters, the safety team may be further subdivided into safety, rescue, and damage assessment.

Monitoring for Safety

A. Set up a monitoring program for:

1. Detection of shelter hazards.

2. Assistance to the fire watch.

3. Aid to shelterees.

> CONTINGENCY
> In the event rescue is required,
> see page 147.
> In the event evacuation is considered,
> see pages 156-157.

B. Keep shelter free of accident-producing hazards.

1. Dangerous elements such as slippery floors, precariously stacked supplies, etc., should be checked for and corrected.

Safety Rules

A. Institute the following safety rules.

1. Shelterees must walk, not run, in the shelter; aisles and walkways must be free of debris and tripping hazards.

2. Spilled water, waste materials, or other slippery substances on the floor must be avoided.

3. Only authorized personnel can operate or repair shelter equipment.

4. Shelterees must look where they are going.

5. Objects should never be thrown within the shelter.

6. Use of toxic or flammable materials will be prohibited.

7. Piling or stocking materials must be done carefully from a firm base. Do not stock or pile too high.

8. Persons should not lean against or sit on unsteadily stocked materials.

9. Hazardous and potentially dangerous jobs will be assigned to adults.

10. Shelterees should be cautioned about potentially hazardous aspects in routine shelter living, such as cuts from opening metal cans.

11. Cigarette butts should be placed in special metal cans.

INTERNAL COMMUNICATIONS

Communication from Management to Shelterees

A. Set up methods for shelter management to communicate with shelterees.

1. In addition to verbal communications, equipment which can be used includes:
   a. Improvised paper megaphones.
   b. Written material posted on an improvised bulletin board and at specific locations in the shelter.
   c. Posters, signs, and charts to remind shelterees of important shelter rules, locations of shelter activities, and directions to operate equipment or carry out specific activities.
   d. Extension telephones, public address or intercom systems, assuming the availability of power.
2. Factors to be considered in establishing internal communications are:
   a. What information should be given and who on the staff should announce it.
      (1) The manager should usually give out critical information with shelter-wide implications.
      (2) The appropriate deputy manager or task team heads may announce information associated with specific shelter activities.
      (3) Community leaders may pass on routine information.
   b. Set up a signal to signify when shelterees must quiet down for a communication from shelter management.

B. Provide daily briefings to shelterees.

1. Information about shelter status and outside conditions should be given regularly to prevent

rumors and to reassure shelterees about the situation.

2. Regularly scheduled briefings should be held even if there is no important news to report.

Communication from Shelterees to Management

A. Establish methods for shelterees to communicate with management.

1. A chain of command should be clearly established for shelterees to communicate with management:

   a. First report to the appropriate unit, section, or team head.

   b. Then, if necessary, to the division head or appropriate deputy manager.

   c. Finally, directly to the shelter manager.

2. Emergency information should go directly to the shelter manager and/or the appropriate deputy managers and team leaders.

3. An advisory group, discussed in the Shelter Organization chapter, will also represent the shelterees to management, and will help shelter leaders to solve problems dealing with shelteree attitudes and behavior.

B. Schedule group sessions between shelterees and management when desirable.

1. Group discussions to express gripes, share problems, and give mutual support should not be a scheduled part of the daily activities, but should be called upon shelteree or management request.

2. Group sessions should be deferred if management feels a particular shelter situation will be aggravated or management control threatened by a mass meeting.

COMMUNICATIONS OUTSIDE THE SHELTER

Team Selection

A. Appoint a communications team and team head.

1. Sources of team head and members, if radio equipment is used, will be repairmen, electronic technicians, ham operators, electrical engineers, etc. If no communication equipment is present, technical background will not be necessary. (See Table II, page 38.)

2. Stenographic skills will be valuable for recording all incoming and outgoing messages.

3. At least one person should be on communications-monitoring duty at all times.

Equipment

A. Have available communications equipment inventoried and checked for operability.

B. If communication equipment is portable, locate communications area in or near the management area.

C. Supervise the use and maintenance of all equipment.

1. Only authorized persons should be permitted to use communications equipment.

2. Have all incoming communications recorded in a communications log.

3. See that messages are routed to and received by the proper person.

Communication Assessment and Transmission

A. Assess incoming information for its effect upon the shelter situation and the shelterees.

1. Incoming messages are intended primarily for shelter management, who must decide when and how this information should be presented to the shelter population.

2. Technical information must be explained to shelterees to avoid misinterpretation of such messages.

B. Supervise the transmission of communication to external points.

1. Only specific emergency information should be sent to and requested from control centers unless otherwise indicated.

2. Runners may be used between shelters and control centers after radiation levels have been determined to be safe.

SHELTER ADMINISTRATION

Team Selection

A. Appoint an administration team and team head.

1. The head of the administration team should be appointed before shelteree registration forms are distributed. He should be selected from among office managers, corporate administrative assistants, or executive secretaries who have some supervisory experience. (See Table II, page 38.)

2. Team members may be recruited from secretaries, stenographers, etc.

3. Responsibilities will include keeping shelter records, conducting shelteree registration, helping to collect private property, conducting a shelter census, and assisting the manager in carrying out other administrative responsibilities.

Registration

A. Have registration form (see page 159) distributed to shelterees, and show them how to complete it.

1. The purposes of the registration form are:

   a. To supply data on manpower resources within the shelter for task team assignment.

   b. To identify the immediate or special problems of individual shelterees.

   c. To provide information for assigning shelterees to community groups.

   d. To serve as aids for locating lost family members, returning personal property, and taking population censuses.

2. Registration forms stocked in the shelter should be used. If none are stocked, use any available paper to gather as much as possible of the information contained in the sample form (page 159) for each shelteree.

3. A number of people may require assistance in filling out the registration form.

B. Evaluate the information on the registration form for assigning various responsibilities in the shelter.

1. Have the administration team make up a master list of the available skills and occupations of shelterees.

2. The administrative team should maintain these records as accurately as possible.

Schedule of Activities

A. Prepare a schedule of shelter activities, if one has not already been made up. (See pages 165-166 for sample schedules.)

1. Previously designed schedules should be evaluated and adapted to the particular shelter situation.

2. A schedule of protective activities (radiological and medical tasks, etc.) should be initiated immediately. A full schedule, including recreation and training, can be implemented after the shelter activities necessary for survival are organized.

3. Factors to consider in setting up the shelter schedule are:

   a. Shelterees will have a short span of attention, and activities should be scheduled for short periods of time.

   b. Naps and daytime rest periods will be needed by adults as well as children.

   c. Water and food breaks are recommended for mid-morning, mid-afternoon, and evening, making six meals rather than three meals a day.

4. A two-shift schedule may have to be implemented because of lack of sleeping space. If this is the case, timing of activities will have to be modified.

a. Optimum use should be made of common time (eight hours approximately) when members of both shifts will be awake.

b. Because noise and other distractions from various shelter activities may disturb the sleeping shift, quiet activities should be scheduled insofar as possible during the eight hours when the other shift is sleeping.

Shelter Records

A. Have all important shelter events recorded in appropriate shelter records. (See pages 160-163 for sample shelter records.)

1. The shelter log will contain all significant events that occur during the shelter stay. These include the date and time of entry; descriptions of events such as births, deaths, illnesses, and violations; and the names of persons involved.

   a. This document should be turned over to the authorities after the shelter stay is terminated.

   b. The log should be maintained at all times; during the night, the management staff or night watch on duty may make any appropriate entries.

2. The communications log should include all incoming and outgoing messages on a 24-hour basis.

   a. Information in the communications log should include the date, time, and type of communication used; who sent the message if it is incoming, and who gave the message if it is outgoing; a brief description of the contents; to whom the message was delivered, or to whom the message was addressed; and the initials of the person making the notation.

   b. During sleep periods, the night watch may handle this if communication traffic is light.

3. The radiation monitoring log should contain: (1) the periodic readings of radiation levels for

a given time for specified shelter areas, and (2) the accumulated doses for shelterees.

a. The log should include the date and time of the reading, the shelter area that has been monitored, the dose rate or current reading, the accumulated dose up to the time of the last reading, remarks, and the initials of the monitor taking the readings.

4. A shelteree radiation exposure record should be kept for persons engaged in radiological operations or otherwise exposed to high radiation.

   a. The exposure record should list the name of the shelteree, the daily dose, and the total dose accumulated.

   b. In small shelters, it may be feasible for each shelteree to keep his own radiation exposure record, if the shelter manager approves. Persons can be advised daily, through a group announcement, of their estimated exposure during the previous 24 hours.

   c. Before emergence, shelterees should be informed of the approximate dose they have received throughout the shelter stay.

WATER

CONTINGENCY
In the event of a severe water shortage, see page 152.

Team Selection

A. Appoint a water team and team head.

1. The team head should be an intelligent male in good health. (See Table II, page 38.)

2. No special skills will be needed by team members unless extra water must be obtained through special plumbing procedures. Good health is essential. If filled water drums must be moved, the team should include strong males.

3. Responsibilities will include inventory, preparation, and distribution of water.

   a. In a small, single-area shelter (under 200), the food and water teams may be combined.

   b. In a very large or multi-area shelter, more than one water team may be necessary.

Inventory, Rationing, and Scheduling

A. Have a complete inventory of supplies taken.

1. In a large shelter, it may be necessary to estimate the shelter water supply in order to distribute the first serving of water.

2. The amounts of water can be calculated as follows:

   a. Each OCD water drum holds 17.5 gallons of water, or one quart (32 ounces) per day per person for five persons during a two-week stay.

   b. Each OCD cup, filled to the brim, holds six ounces.

c. Any additional water which may be available in the building's water system should be conservatively estimated.

B. Set up rationing procedures based on one quart per person per day during a two-week stay.

1. One quart of water per day is enough for survival IF:
   a. Temperature and humidity are not too high.
   b. Vigorous activity is restricted.
   c. Salty or thirst-provoking foods are not included in the diet.
   d. Illness and injury (such as burns or diarrhea) do not occur.
2. Other factors that may affect this rationing include:
   a. Shelter overcrowding.
   b. Water loss.
   c. Shelter stay extended beyond a two-week period.
3. If possible, save water for the immediate post-shelter period.

C. Set up a schedule for water distribution.

1. Serve water five or six times a day, combined with food servings. More survival rations will be eaten if they are served with a cup of water.
2. In very small shelters, it may be possible to allow individuals to drink their quart of water as they desire, as long as detailed records are kept of each individual's water consumption.

Preparation and Distribution

A. Water from sources other than OCD drums may have to be purified before use.

1. Water purification tablets and instructions for their use are stocked in the OCD sanitation kit.

2. Several drops of chlorine household bleach or tincture of iodine added to each quart of water are also effective for combating bacteria, as is boiling the water for at least one minute.

3. Purification may give the water a strange taste. Reassure shelterees that it is safe to drink.

B. Supervise the tapping of the OCD water drums according to the instructions found in the sanitation kit.

1. To obtain a flow of water, the drums must be siphoned with a tube which is provided in the kit. To control this water flow, use a clamp from the syringe in some OCD medical supplies, or improvise a tie or clamp such as a paper clip.
   WARNING: If not careful, persons may spill water when they first use the siphon.

2. When a drum is too low for water to flow freely, it should be elevated by placing it on another drum or similar object.

3. After the water supply in the drum has been finished, use any water which may have spilled into the outer bag before turning over the empty drum for other purposes.

4. Only authorized persons should handle and distribute water. A monitor should be placed at the water supply at all times, and individual shelteree records should be kept, if possible.

C. Decontamination will most likely not be necessary for OCD water supplies. Should visual inspection of water reveal the presence of fallout particles, follow the simple decontamination procedures on page 51.

IMPORTANT: Do not discard water because it contains fallout particles.

Distribution and Records

A. Select the procedures for distributing water which will insure that each shelteree gets his ration of water with a minimum of spillage.

1. Distribution methods will depend upon: (1) the size of the population, (2) the shelter configuration, and (3) the types of serving equipment available.
   WARNING: Tell shelterees to handle cups with care. They must last for an extended period of time.

2. One method of distribution is for the unit leader to collect the cups for his unit, take them to the water drum, have the cups filled and capped with plastic lids, and carry them to his shelter group.

3. Where equipment such as carts or wagons is available, the water can be brought to individual shelterees or units.

4. More than one water distribution center may be necessary in large shelters or where there are several separate shelter areas.

B. Supervise record keeping to insure equal rations for all shelterees.

FOOD

Team Selection

A. Appoint a food team and team head.

1. The team head should be an intelligent male in good health. (See Table II, page 38.)

2. No special skills will be needed by team members if using OCD stocks.

3. Responsibilities will include inventory, preparation, and distribution of food.

   a. In small shelters, the food and water teams may be combined.

Inventory and Rationing

A. Have a complete inventory of supplies taken.

1. Estimate the food inventory in a large shelter in order to distribute the first shelter rations.

2. Calculate the amounts of rations as follows:
   a. OCD survival rations are stocked at 10,000 calories per shelter space per two weeks. The cans vary in weight and contents according to the type of rations they contain. (See Table VI, page 96.)
   b. Carbohydrate supplement (hard candy), if stocked, may be substituted for up to 1/3 of the diet.
   c. Estimate conservatively any additional sources of food from private supplies, vending machines, stores, concessions, or kitchens in the building.

B. On the basis of the population census, establish rationing procedures based on 700 calories per person per day for a two-week period.

1. The number of units of OCD survival rations that make up 700 calories will vary with different types of cereal rations. (See Table VI, page 96.)

2. Unanticipated factors that may affect rationing include:

   a. Shelter overcrowding beyond designated capacity.

   b. Food loss or spoilage.

   c. An extended shelter stay (beyond the two-week period).

3. Equal rations for all shelterees will generally be the most practical arrangement. Special rations for shelter groups with special food needs may be possible if shelterees agree to such arrangements. Those who require more food include teams engaged in heavy activity, pregnant and nursing women, adolescent males.

4. Whenever possible, save food for the immediate post-shelter period.

Meal Scheduling

A. Decide when to schedule first in-shelter meal.

1. Serve first meal after:

   a. Initial community organization has been accomplished.

   b. Feeding procedures are set up.

   c. Shelterees indicate that they have adjusted enough to be willing to eat.

2. Children and infants may have to be fed earlier than adults.

B. Set up regular feeding schedule.

1. Five or six servings per day, if shelter traffic permits, will tend to increase acceptance of survival rations. Rations will be more palatable when consumed in smaller quantities. Multiple servings during the day will tend to reduce hunger pains.

2. Distribute food rations with water rations whenever possible in order to make the biscuits more acceptable.

3. Infants and children may require a separate and more flexible schedule.

Preparation and Distribution

A. Locate food preparation area in the most convenient place.

1. The area should be close to the water supply and as far as possible from the toilets, sick bay, and shift sleeping areas.

2. One centralized food preparation area is sufficient if the population is under 300 in a single shelter area.

3. More than one area may be necessary if the population is large (more than 2,000 people) or if the shelter is made up of physically separated areas.

B. Set up procedures to prepare food.

1. For OCD supplies:

   a. Open fiberboard cases and metal cans carefully so they may be reused when empty. Try to leave a lid on one side of the top flap.

2. Only equipment needed will be a can opener, stocked in the sanitation kit.

3. Gruel may be made for sick and for infants by mixing water with rations in individual cups. Eating utensils will have to be improvised.

C. See that sanitation rules are followed.

1. Before handling rations, food team members should use the hand cleaner (stocked with some supplies) or wash hands, if water is available.

2. Only persons in good health should handle food.

3. Minimize handling of food. Keep the rations in waxed paper until they are handed to shelterees.

4. Remind shelterees not to put rations where they might be dropped, spilled, or crushed.

D. Select food distribution procedures which will insure that each shelteree gets his ration of food with a minimum of confusion, and spillage, and within a reasonable period of time.

1. The standard distribution method will be for the unit leader to collect survival rations and carry them to his unit.

2. Equipment for carrying rations to shelterees includes trays, baskets, and cans. These may be improvised from water drum lids, food case covers, etc.

Eating Procedures

A. Instruct shelterees in rationing and eating procedures.

1. Rations should be described and shelterees told that although rations may be monotonous, they are nutritionally adequate to insure survival.

B. Establish a separate eating area, if possible, particularly if serving augmented stocks.

1. Facilities may be improvised if benches and tables are not available. For example, a bench can be made from an unhinged door set upon boxes of supplies.

2. If a separate eating area is not practical, shelterees can eat in their assigned living areas.

C. Try to see that shelterees consume their allotted ration during mealtime.

1. Serve rations for only one meal at a time.

2. Encourage children to eat and drink. If they do not eat, they will be much more likely to suffer physical discomfort (such as nausea).

3. Have the unit head distribute only the amount of survival rations each member of his unit wants to eat. Have unit head keep remainder of rations in their waxed-paper coverings, and return unconsumed rations to food team after mealtime.

Clean-Up

A. See that clean-up and garbage disposal are done routinely after each meal.

1. Anything reusable should be collected.

2. Unit or section leaders should see that no littering or spilling occurs during or after meals.

Augmented Food Stocks

A. If the shelter has foods in addition to OCD stocks, feeding procedures will become more complicated. More equipment will be necessary, and personnel must be more skilled.

1. In implementing an augmented food capability, consider the following factors:
   a. Menu planning.
   b. Effects of heating augmented foods upon shelter temperature.
   c. Additional water which will be necessary if foods are used that may provoke thirst or require larger quantities of water (salty or high protein foods).
   d. Storage problems (for food which may spoil with improper handling and storage).
   e. Eating utensils will have to be kept clean to prevent illness.
   f. Garbage disposal will be an increased problem.

Infant Feeding

See pages 120-121 for guidance on infant feeding.

Table VI
Food Rations

TYPE	DESCRIPTION	SAMPLE MEAL DISTRIBUTION	
		Without Carbohydrate Supplement	With Carbohydrate Supplement (equal to 1/3 of total diet)
Crackers or biscuits in a 5-gallon can	2" x 2" square cracker, containing approximately 22 calories. Taste is similar to graham crackers.	Breakfast 7 biscuits/crackers Snack 3 biscuits/crackers Lunch 8 biscuits/crackers Snack 3 biscuits/crackers Dinner 8 biscuits/crackers Snack 3 biscuits/crackers **Total daily ration 32 biscuits/crackers**	5 biscuits/crackers, 2 drops 2 biscuits/crackers, 1 drop 5 biscuits/crackers, 2 drops 2 biscuits/crackers, 2 drops 5 biscuits/crackers, 2 drops 2 biscuits/crackers, 2 drops **Total daily ration 21 biscuits/crackers, 11 drops**
Crackers or biscuits in a 2.5-gallon can	2.5" x 2.5" cracker, containing approximately 30 calories. Taste is similar to graham crackers.	Breakfast 5 biscuits/crackers Snack 2 biscuits/crackers Lunch 6 biscuits/crackers Snack 2 biscuits/crackers Dinner 6 biscuits/crackers Snack 2 biscuits/crackers **Total – 23 biscuits/crackers**	3 biscuits/crackers, 2 drops 2 biscuits/crackers, 1 drop 3 biscuits/crackers, 2 drops 2 biscuits/crackers, 2 drops 3 biscuits/crackers, 2 drops 2 biscuits/crackers, 2 drops **Total – 15 biscuits/crackers, 11 drops**
Wafers in a 5-gallon can	2" x 2" x 1/4" or 1-3/4" x 1-3/4" x 3/8" wafer, containing approximately 75 calories.	Breakfast 2 wafers Snack 1 wafer Lunch 2 wafers Snack 1 wafer Dinner 2 wafers Snack 1 wafer **Total – 9 wafers**	1 wafer, 2 drops 1 wafer, 1 drop 1 wafer, 2 drops 1 wafer, 2 drops 1 wafer, 2 drops 1 wafer, 2 drops **Total – 6 wafers, 11 drops**
Carbohydrate supplement (hard candy) in 5-gallon cans	Similar to lemon and cherry drops. Forms 1/3 by weight of food ration in place of equivalent amount of biscuits. Each piece contains approximately 20 calories.		

SANITATION

Team Selection

A. Appoint a sanitation team and team head.

1. Sanitation team head may be selected from sanitary engineers, hygiene teachers, public health people, hygienists, and custodial supervisors. (See Table II, page 39.)

2. Team members require no special qualifications except general good health.

3. Responsibilities include maintaining shelter cleanliness, monitoring and rationing sanitation supplies, and regulating toilet traffic.

4. The number and composition of the team will depend on shelter size and configuration. In a large shelter, the following sub-teams may be needed.
   a. A toilet team with at least one person to monitor the toilet area.
   b. A trash and garbage team (shelter may be divided into areas for garbage and trash collection).
   c. Additional subteams to deal with body disposal, personal hygiene (if water is being used for washing), etc.

5. The sanitation team should have enough members for multiple shifts, since some of their duties can be unpleasant. The shift ideally should consist of not more than two hours under heavy duty conditions and perhaps four hours under normal conditions.

Toilet Facilities

A. Set up procedures for the use of toilet facilities.

1. Check to see whether normal washroom facilities are operable before setting up OCD facilities. Before using normal toilet facilities, check

status of water supplies. Remember that toilet closets can hold four gallons of drinkable water.

2. In absence of abnormal conditions, set up one sanitation kit for every 50 shelterees. Factors increasing the number of commodes are:
   a. Separate male and female toilet facilities.
   b. Presence of shelterees with special sanitation needs (e.g., young children).
   c. Presence of illness requiring increased toilet use.

3. Primary toilet facilities will consist of the empty 17.5-gallon water drums which should be made available for toilet use as soon as the water in each drum is consumed.
   a. Care should be taken not to break the polyethelene bag when setting up the toilet.
   b. When using disinfectant in the toilet, do NOT mix it with water.

4. Read pages 121-122 for guidance on special sanitation problems caused by children.

5. Toilet facilities should be segregated by sexes, preferably by establishing separate toilet areas, if possible.

6. Privacy screens should be improvised if the configuration of the shelter does not provide toilet areas.

7. Conservation of sanitation supplies, such as disinfectant and toilet paper, should be encouraged. Sanitation team personnel should monitor the rate at which these supplies are being used, and if it appears that a shortage will develop, they should be rationed.

8. If heavy toilet traffic exists early in the morning or late at night, it can be adjusted by setting different times for reveille or lights out.

9. Cleanliness will be the responsibility of all shelterees using the toilet facilities.
   a. To assist in cleanliness, all shelterees, male and female, should perform all toilet functions in the seated position.
   b. The waterless hand cleaner in some OCD sanitation kits is primarily for use by medical, food, and sanitation personnel who are required to clean their hands after using the toilet.
   c. Adults should accompany all children to toilet facilities.

10. When tieing off filled sanitation containers, leave slack for expansion of gases.

B. See to it that sanitation supplies are improvised from such things as empty cartons, tin cans, rags, wastebaskets, cloth, multiple layers of soft paper toweling, newspapers, etc.

1. A male urinal can be made from two empty five-gallon food tins in a cardboard box.

C. Inform shelterees of the sanitation rules.

1. The problems of confinement, crowded conditions, and primitive facilities will be trying at best. Inadequate and unclean sanitation facilities and procedures could result in widespread illness.

2. Stress conservation of sanitary supplies.

Clean-up and Garbage Disposal

A. Establish regular clean-up periods, preferably after every meal.

1. OCD stocks should result in minimal food garbage. If additional stocks are used, wet garbage may be expected.

2. No usable items should be thrown away. Make sure that waxpaper in which rations are wrapped, empty boxes, and storage tins are not discarded.

3. Trash and garbage should, whenever possible, be disposed of or stored in covered containers (such as cardboard or metal containers which have been opened carefully along three sides so that the top of the container can serve as a lid).

   a. Covered metal containers, such as empty food tins, should be used for the deposit of medical waste, sanitary napkins, liquid or semi-liquid wastes.

4. Garbage disposal areas should be located as far from living areas as possible, and as close to the shelter entrance or removal areas as convenient.

   a. Depending on radiation level, the garbage may be thrown from the shelter or placed in another part of the building until it can be removed and buried.

5. If additional disinfectant is available, it should be used on garbage and medical waste as well as human waste.

6. If available, treated sawdust, sweeping compound, or bicarbonate of soda and shredded paper should be used immediately to absorb moisture and odors from vomiting or diarrhea.

Personal Cleanliness

A. **Set up procedures for personal hygiene with OCD stocks.**

1. Sponge bathing may be permitted in shelters with adequate water supply, especially for young children in diapers.

   a. If only OCD water supply is available, the rate of water consumption should be measured for the first several days to see if the supply will be adequate for a very occasional sponge bath.

2. Menstruation periods may be affected by the fear and anxiety that may be brought on by a

nuclear attack. It may be either delayed for some months or actually initiated by the disaster. Sanitary napkins may be used as bandages, etc., if they are not being used for their primary purpose.

3. Clothing which will be worn for the duration of the shelter stay may become uncomfortable as the shelter gets warmer. Discarded articles of clothing will have many valuable uses, such as blankets, bedding, partitions, stretchers, diapers, or cleaning cloths.

   CAUTION: Before using clothing for other shelter purposes, consider shelterees' clothing needs for the post-shelter period.

4. Oral hygiene, shaving, etc. will not be possible unless (1) shelterees bring their own equipment, and (2) there is an adequate supply of water. Most people will quickly adjust to the austere personal hygiene conditions.

SOCIAL CONTROL

Team Selection

A. Appoint a security team and team head.

1. Sources for the security team head and members include public law enforcement officers, industrial or government security guards, private detectives, former MP's, etc. Generally, males should be selected. If females are to be guarded, women should be added to the team. (See Table II, page 39.)

2. Responsibilities include maintaining law and order, guarding shelter supplies, directing shelteree movements to and from the shelter, and guarding major offenders who are isolated from other shelterees.

Shelter Rules

A. Develop a set of shelter rules for the safety and well-being of shelterees.

1. Rules should govern all shelter operations, use of supplies, s cial behavior, maintenance of order, and shelter traffic.

   a. Rules for social behavior include control of sexual expression, gambling, fighting, hoarding, smoking, use of personal belongings, etc.

2. Rules should be based, where possible, on continuity with the pre-shelter society.

3. All regulations related to safety and survival will be made by shelter management.

4. Shelterees, through their advisory committee or their representatives, may assist in making rules concerning shelter living.

B. **Explain and discuss rules with shelterees in a general shelter orientation and review them frequently. Be sure that the rules are clearly understood.**

1. Brief group and team leaders on rules pertaining to their responsibility. They, in turn, will discuss rules with their team and group members.

2. Post shelter rules in prominent places; for example, rules for use of equipment should be posted on or near each piece of equipment.

3. Inform shelterees that records of serious violations will be kept and turned over to proper authorities as soon as feasible.

Rule Violations

A. **In the event of a rule violation, evaluate the seriousness of the offense.**

1. In order to assess the seriousness of the violation, consider the following factors:

   a. What is the nature of the disorder and its effects upon shelterees?

   b. What are the causes and the corrective actions which must be taken?

   c. Does the situation appear to be organized and who are the leaders?

   d. What are the implications of this disorder and how does it affect the mood of the shelterees?

B. **If necessary, apply corrective action to prevent and control further violations.**

1. Shelteree survival, and not the administration of justice, should be the sole basis for invoking corrective actions.

2. The effects of corrective actions on other shelterees should be considered, and penalties which will have a negative effect, such as floggings or denying food, should be avoided.

3. Corrective actions should be the responsibility of the manager.

4. Corrective actions or punishments which might be considered include:

   a. Speaking to the offender and giving him a warning.

   b. Changing his shelter location or assignment.

   c. Warning of isolation.

   d. Isolation or, if necessary, isolation under restraint.

   e. Warning of expulsion from shelter area.

   f. Actual expulsion, as a final resort. In this case, the manager should make sure that the person forced to leave cannot harm the shelter from the outside.

SLEEP

A. Calculate the space available for sleeping. If at all possible, have all shelterees sleep at the same time.

1. Space requirements:

Square Feet Available	Conditions for Sleeping 100 Shelterees
650	a. All except children have to sleep with legs bent. b. Situation may be uncomfortable enough to consider "shift sleeping."
900	a. Almost all shelterees will be able to sleep on their sides with legs extended. b. Some will be able to sleep on their backs.
1,500	a. Almost all shelterees will be able to sleep on their backs with legs extended. b. There will be sufficient room to extend arms and move body slightly without interfering with other shelterees.

2. Other factors to be considered in location of sleeping area are:
   a. Shelter size.
   b. Layout.
   c. Ventilation.
   d. Noise and light control.
   e. Location of toilet facilities.

B. If unable to sleep all shelterees together, establish shift sleeping arrangements for two shifts.

1. Shift sleeping will require:
   a. A separation (either physical distance or barrier) between the sleeping and activity area.

b. Location of the toilet area so that shelterees in the day area can use the facilities without disturbing sleepers.

Sleep Assignments

A. Assign shelterees to sleeping area by groups.

1. Assign sleeping area by section (groups of 50) or units (groups of 10) depending upon shelter size.

2. Within a group, shelterees should be separated on the basis of sex, age, and marital status. Single men should be separated from single women by family groups with children.

3. In large shelters, sleeping areas may be assigned to the division, and separation of sexes coordinated by the section or division.

B. Assign shelterees to standarized, fixed sleeping area and position.

1. Leave aisle space where possible.

2. Two alternate positions are:

   a. Arrange head-to-toe alternately.

      (1) To reduce the spread of communicable diseases and respiratory infections.

      (2) For best use of space.

   b. Head-to-head.

      (1) This may not be the most desirable from management standpoint, but shelterees may be more comfortable this way.

Night Watch

A. Assign a night watch to monitor the shelter. The duty will vary with the size of the shelter. (See Table II, page 39.)

1. In a small shelter, assign at least two people to be on duty at the same time in order to:

a. Maintain law and order.

b. Assist shelterees.

c. Monitor communication.

d. Watch for fire and other hazards, etc.

e. Keep each other alert.

2. In a large shelter, each of the above functions may require personnel from the safety, security, and communications teams, as well as the regular night watch shift.

3. Other factors which will help to determine the size of the night watch will be:

   a. The emotional state of shelterees.

   b. The number of shelter operations requiring attention.

   c. The size of the shelter population. At least two people will be needed for approximately 200 sleepers.

4. One management representative should be on night watch duty at all times.

5. Length of watch should be one hour, but not longer than two hours. Use as many different people as possible.

Facilities

A. Set up sleeping facilities for shelterees.

1. On-the-floor sleeping.

   a. If there is enough floor space to accomodate all shelterees, everyone may sleep on the floor if no other facilities are present.

   b. Discomfort may result from hardness, coolness, and, perhaps, dampness of the floor. Any barrier placed between the sleeper and the floor will help, such as: carpets, drapes, cardboard, newspapers, clothing, etc.

2. Other improvised facilities may be found, particularly in dual-purpose shelters. For example, in a warehouse or retail store, rugs may be found that can be unrolled for sleeping purposes.

3. Children's facilities.

   a. Small children and infants can sleep in cardboard cartons, if available. They should be assigned to specific cardboard cartons for the entire stay.

4. Modified bunking facilities.

   a. Bunks may be improvised from existing facilities. Because this will take time and equipment, it should only be used when such improvised bunks will greatly increase the amount of shelter space available for other purposes.

   b. An example of improvised tier bunks that has been demonstrated is to fasten together six or seven multi-tiered, open-back metal bookcases or stock shelves.

5. Bunks.

   a. If bunks have to be assembled and dismantled daily, establish procedures and schedules for daytime and nighttime use.

   b. Assign personnel to assemble and dismantle the bunks.

   c. Do not place children or elderly persons on high tiers of bunks.

B. **Improvise bedding and partitions whenever possible.**

1. Bedding can be made from clothing, towels, newspapers, etc.

2. Natural and improvised partitions, such as screens, blankets, or blackboards, should be used to increase privacy and reduce noise.

Schedule

A. Develop a standardized schedule for sleep and rest times.

1. First night's sleep should be set up after considering:
   a. The time of entry.
   b. The physical and emotional status of shelterees.
   c. How long it takes to establish shelter operations.
2. After the sleep routine is established, schedule daytime rest or quiet periods for children and adults when all activity and noise is controlled and reduced.

Sleep Problems

A. Control sleep problems.

1. Be aware of the potential causes of sleep problems.
   a. The austere sleeping facilities and the uncomfortable physical environment, such as temperature extremes.
   b. The disturbing behavior of some shelterees, in the form of crying, snoring, moving about, etc.
2. Set up and present rules and procedures for conduct during sleeping hours.
   a. No talking: noise must be kept to a level which permits sleep, particularly if shift sleeping is involved. Children and teenagers may be especially difficult to quiet.
   b. Lights out must apply to the entire group. If possible, lights should be dimmed, but some light will be needed to permit necessary traffic.
   c. High social standards must be maintained. This pertains particularly to sexual behavior.

The night watch should be vigilant in identifying potential problems and preventing them from becoming real problems.

d. Some form of relaxing activity before turning lights out, such as reading stories, may aid in quieting the shelter down.

3. Place potentially disrupting people near the command area.

B. Make sure that you sleep at night. Delegate your authority to your deputies and have them wake you only when necessary.

PSYCHOLOGICAL SUPPORT

A. The morale and emotional well being of shelterees will depend upon a number of factors. Important among these are:

1. Strong, positive leadership, which will strengthen shelterees' belief that they are in good hands.

2. Information which will help shelterees to orient themselves to their surroundings and reassure them that they are protected.

3. Task assignments for shelter operations through which people will feel that they are helping themselves and others.

4. Encouragement of emotional expression among shelterees and positive group interaction which will aid people to help each other.

5. A planned shelter program which insures protection and care of shelterees physically and emotionally.

Team Selection

A. If emotional problems develop, select a psychological support team and team head to give psychological (emotional) first aid.

1. Select a team from community group leaders, psychiatrists or psychologists, physicians, social workers, nurses, vocational counselors, teachers, etc. (See Table II, page 39.)

2. Instruct the team to take a positive, kindly approach to behavioral problems, recognizing that the limitations are temporary, but very real.

Treatment

A. Consult MEDICAL CARE IN SHELTERS (pages 55-57), the medical manual stocked in many shelters, for guidelines on symptoms and treatment of disaster fatigue.

B. Have the team employ the basic principles of psychological first aid.

1. The types of persons requiring aid are:

   a. Shelterees who do not make an immediate, spontaneous recovery but who should respond quickly with assistance.

   b. Shelterees suffering from symptoms which may become a disturbance to others, including those suffering from delusions or overexcitement.

   c. Special cases, such as alcoholics, drug addicts, or the mentally ill.

2. These people will be located from reports by (1) group leaders or staff, (2) requests for aid, and (3) reports from other shelterees.

3. The main technique is a brief interview with the disturbed person to hear his problems, to give him reassurance, and to identify what capabilities he has or what problems he presents.

   a. The interviewee should be permitted to talk without interruption about the disaster and to express any fears or anxieties.

   b. At the end of the interview, the role that the interviewee can play in the shelter should be discussed and an assignment made if possible.

   c. The interviewer should accept what the shelteree says without criticism.

4. A task assignment should be made after the interview, even if it is a very simple job. Make sure that the person is placed under the supervision of a sympathetic leader.

B. People with serious emotional problems or mental illness will probably not be helped by psychological first aid, and more extensive treatment will not be possible in most shelters.

1. Symptoms and treatment of more serious probblems are listed in Table VII, page 115.

2. Control measures may be needed if someone's behavior becomes dangerous to himself or to others, or if his behavior is disrupting shelter operations.

   a. Drugs, such as phenobarbital, supplied in the OCD medical kit, should be administered by the most qualified medical person available. Directions are located in the medical kit.

   b. Use of restraints should be avoided if at all possible, unless the individual is endangering himself or others. If necessary, procedures are as follows:

      (1) Use sheets, blankets, or strips of cloth around ankles and wrists.

      (2) A restrained person should be moved to a separate area if possible. An attendant should be with the person constantly in order to make him as comfortable as possible and to release restraints as soon as acute danger has passed.

   c. Confiscation of potentially dangerous property should be carried out only if: (1) there is a serious threat to the well-being of the individual or to others in the shelter, or (2) the item is essential for other important shelter functions.

      (1) Disturbed persons, particularly those with delusional symptoms, may try to find dangerous weapons. Also, alcoholics or drug addicts will go to great lengths to obtain alcohol or drugs, including stealing from shelter supplies.

      (2) General procedures for confiscation are:

         (a) Have a management representative explain why the item cannot be retained and ask that it be volunteered.

(b) If this is unsuccessful, assemble a team of able-bodied persons--up to six persons--in order to represent an overwhelming show of force.

(c) If show of force does not work, have team confiscate item.

C. Establish procedures to handle special addiction problems.

1. Refer to guidelines in Medical Care in Shelters, pages 1-2.

2. Alcoholics, in addition to signs of drunkenness, may, if deprived suddenly of alcohol, show severe symptoms which can last from several days to several weeks.

3. Opiate addicts will show no initial signs except characteristic scars and needle marks on arms and legs. However, if the drug is withdrawn, acute illness develops--sweating, restlessness, vomiting, severe muscular pains. This will last for several days with maximum intensity at around 48 hours after the last dose.

4. Barbiturate addicts may have epileptic-like seizures if their supply of drugs is withdrawn abruptly.

5. Treatment involves permitting them to continue to use their own drugs or alcohol (rationed, if possible).

   a. If they do not have these, phenobarbital may be administered by the most qualified medical person, after considering medical needs of the shelter.

   b. It may be necessary to apply restraints to prevent addicts from hurting themselves and others.

Table VII
Symptoms and Treatment of Behavioral Disturbances

TYPES OF REACTIONS	DESCRIPTION	SPECIAL MANAGEMENT PROBLEMS	GENERAL PRINCIPLES OF TREATMENT
Acute Fear	Inability or unwillingness to leave a particular place, cringing at sudden movement, total dependance on others, screaming, etc.	In the most extreme form, panic or uncontrolled flight; this is highly contagious and must be quickly controlled.	Give reassurance and opportunity for these people to do something useful within their capability. Control panic reactions by force if necessary.
Physical or Somatic Reactions	May be severe and long lasting; includes stomach distress, symptoms of radiation sickness, functional blindness, or the loss of the use of arms and legs.	Difficult to determine whether there are physical origins to the symptoms.	Unless there is contrary medical evidence, the disability should be considered temporary and the individual encouraged to participate in shelter activities insofar as possible.
Depressed Reactions	Overwhelmed by grief and helplessness, withdrawn from social contact, or constantly talking about their own problems.	Watch for the loss of will to live and possible suicide.	May be the most responsive to psychological first aid since they are amenable to suggestion. Keep them away from shelterees who may react antagonistically to them. Make routine-type work assignments.
Overactive Reactions	May become highly active, wander aimlessly, talk continuously, may also become violent.	May hurt themselves, become very agitated and very difficult to handle, or may be used as shelter scapegoats, or, conversely, form groups of their own against another shelteree.	Assign work involving physical activity.
Out-of-Contact Reaction	Tend to be unresponsive to people around them; may be totally mute.	May not welcome and actively resist interaction or encouragement.	Occasional words of encouragement, indications of friendliness, such as an offer of food or mild invitations to participate, should be the limit of psychological support for these people.
Delusional Reactions	May become convinced that shelterees are armed against him and will try to hurt him. May try to spread rumors.	Make sure that rumors are stopped as soon as they begin.	Encourage him to behave in a socially acceptable way even though he believes in his delusions. Do not try to talk him out of these beliefs.

IN-SHELTER TRAINING

Team Selection

A. After completing all essential protective and environmental tasks, appoint a training team and team head.

1. Sources of the team will be teachers, plant training supervisors, training directors, school administrators, etc. (See Table II, page 40.)

2. The training team is responsible for planning, organizing, and teaching courses on:

   a. In-shelter survival and adjustment.

   b. Post-occupancy survival and adjustment.

   c. Basic management and technical skills necessary to carry out shelter assignments.

   d. Ongoing education of school children.

Preparation

A. Have all available training material inventoried, including manuals, pamphlets, books, papers, pencils, blackboards, etc.

B. Set up a daily training schedule.

1. In preparing schedule, consider the condition of the shelterees and the shelter.

2. Each training session should not be more than an hour with frequent breaks scheduled.

3. Training sessions should be spread throughout the day, rather than concentrated at one time.

C. Recommend course content, give the team time to prepare courses, and assign training area.

1. Locate training area in a relatively comfortable area, as free from noise and distraction as possible, and where all can hear and see.

2. Select course contents on the basis of priority; generally, task training first, in-shelter survival next, and then post-shelter training.

D. If no training materials are available, improvise them from available resources.

1. Examples of improvised materials are:

a. Lipsticks as crayons.

b. Newspaper and cardboards as bulletin boards.

Training Principles and Course Content

A. See that the following training principles are followed as much as possible.

1. Make the training content meaningful; that is, directly applicable to the problems facing shelterees.

2. Maintain a slow pace, constantly reviewing major points until they have been learned.

3. Try to get shelterees to participate as much as possible.

4. Vary the training methods to maintain shelter interest.

5. Relate the training program to the estimated duration of stay so that in-shelter adjustment will come at the beginning and post-shelter content toward the end.

6. Use any available visual aids.

7. Recognize that participation will initially be fairly low and that the goal is to encourage the interest of shelterees.

B. The following is the recommended course content for various types of training.

1. **Training for in-shelter living.** The main purpose of training for in-shelter living is to tell shelterees what to expect during shelter occupancy and to teach them the procedures and rules governing their stay. The basic training methods will be lecture, demonstration, and small-group discussion.

   a. The training program for in-shelter living should include the following subjects (not necessarily in the following order).

      (1) The nature of the attack, the protection offered by the shelter structure, and the protective actions that shelterees can take.

      (2) Rules and procedures for use of shelter equipment.

      (3) Policies pertaining to shelteree behavior, property, maintenance of order, etc.

      (4) Procedures for obtaining supplies and using facilities.

      (5) The organization and management of the shelter.

      (6) Means of communication, in-shelter and outside the shelter.

      (7) Procedures for handling complaints and grievances.

      (8) The free-time activities available to shelterees.

      (9) Rudimentary instruction in radiological protection, first aid, nursing care, rescue, psychological support, etc.

      (10) Procedures for coping with emergency situations such as:

         (a) Outbreak of fire.

         (b) Power failure.

         (c) Radiological emergencies.

(d) Temperature extremes.

(e) Depletion of food and water.

(f) Outbreak of epidemic disease or mass injury.

(g) Serious overcrowding of the shelter.

2. Training for post-shelter living. Training for survival in the recovery period will help to prepare shelterees for the hardships they may face upon emerging from the shelter. It will build shelteree morale and motivation by demonstrating that individuals will not be helpless in the face of post-shelter uncertainties.

a. The training program for post-shelter living should include the following subjects:

(1) Medical and sanitation procedures, and facilities for sanitation disposal and prevention and care of illness and injury.

(2) Procedures for radiation protection, including likely sources, detection, reporting, marking, and decontaminating radioactive hazards.

(3) Procedures for locating safe sources, purification and rationing of food and water, and collection of rain water.

(4) Procedures for safety and clean-up operations.

(5) Law and order and the role of the citizen in the post-shelter world.

CHILD CARE

Census

A. Appoint a responsible adult to determine the number and ages of all children in-shelter as well as the number and ages of those children who are separated from their parents and families.

Team Selection

A. If there are more than a few children in the shelter, appoint a child-care team and team head. (See Table II, page 40.)

1. Team leader should be a mature adult, with child-care experience.

2. Members should be made up of responsible women, assisted by teenagers.

3. Duties will be to establish procedures and programs to provide adequate care of children, including feeding, sleeping, recreation, and emotional support.

Physical Care

A. See that special attention is paid to the feeding of infants and children.

1. Food and water requirements will vary with age; in all cases, however, children must eat or nausea and vomiting can be anticipated as a result.

   a. High temperatures usually affect children adversely and they may tend to eat less than they should.

   b. By giving smaller rations more frequently, and making a game out of eating the crackers, some children can be coaxed to eat. Also, holding the candy drops as a reward may help.

   c. Candy drops may be melted in water and gruel made from survival rations and water.

2. Infants' nutritional needs are a function of weight and size.

   a. Normally, babies receive 60 calories per pound per day, but they can live on 20 calories if they have adequate water.

   b. Infants weighing more than 10 pounds may need more than one quart of water per day, particularly if they are not receiving any food and temperatures are high.

   c. If augmented supplies are available, a formula can be made from one can of evaporated milk and 19 ounces of water.

3. With many infants in-shelter, assign special people to prepare and distribute food and water for infants.

B. **See that children get an adequate amount of sleep, including extra daytime naps.**

1. Children should sleep with parents or substitute parents to reduce sleep problems such as bed-wetting and nightmares.

2. Two small children may fit into one adult sleeping space.

3. Put children to bed earlier than adults, whenever possible. Children under six at 7:00, children six to 12 at 9:00, for example.

C. **Prepare for sanitation problems with infants and toddlers.**

1. All small children should be accompanied to the toilet by an adult.

2. Infants and children in diapers may cause a serious sanitation problem. Diapers may be:

   a. Improvised from available materials.

   b. Reused by fashioning a diaper liner from available materials.

c. Extended in use by changing children only after defecation.

d. Disregarded in favor of cleaning up after each child.

D. Establish a program of recreation and education for children.

1. Keeping children occupied is an activity that requires serious attention by management. Behavior of children can be a potent factor in maintaining order in-shelter.

2. Infants and toddlers should receive supervised care by the child-care team in cooperation with the parents.

3. Children 3 to 6: Recommended activities include organized group calisthenics, improvised arts and crafts, stories and singing, recitations, plays, skits, rhymes, etc.

4. Children 7 to 12: Same as above plus small-group games, reading, and puzzles.

5. Education should be used to absorb the attention of children and to explain in language they can understand what has happened and what they can expect.

Emotional Care

A. Provide adequate emotional support for children.

1. Children are often more psychologically resilient than adults. In general, however, they will react similarly to the behavior of adults, particularly parents and friends. If these adults exhibit fear and grief, the children will probably show similar feelings. If children have been directly exposed to the effects of a nuclear disaster, they may be severely disturbed and require special care, even if adults remain calm.

2. Guidelines for care of children in-shelter with their parents are as follows:

a. Whenever possible, keep children with their parents and friends.

b. Give psychological support and physical help to parents so that they are not overwhelmed by the care of their children under shelter conditions.

c. Reassure children and allow them to discuss their experience when they are ready to.

3. Care for children without parents will probably be the most difficult, for these children will be the most upset.

a. Pre-adolescents separated from their parents may be assigned to a substitute parent chosen on the basis of maturity and experience with children. It is preferable for these adults to be known to the children.

b. Older children will probably adjust better in a group of other children supervised by one or more adult counselors.

4. Behavioral problems may appear in some children to varying degrees, even with all efforts to minimize them.

a. Anxiety may appear in the form of aggressiveness, bedwetting, soiling, destructive reactions, and withdrawal. Do not blame, scold, or ridicule children who cannot orient themselves to the shelter, since this will only increase their problems.

b. Children with special social, physical, and emotional problems will need considerable and frequent reassurance regarding their own safety and the safety of their family.

c. Association with undisturbed children in group activity should be encouraged.

d. Sufficient sleep is important. Because these children are likely to be restless, quiet periods before bedtime may help them to settle down.

e. These children should be kept occupied in manageable activities under close supervision.

CARE OF AGED

A. See that elderly shelterees are given whatever special assistance they need, such as help in eating and walking.

1. See that they get enough rest.
2. Provide them with extra clothing.
3. Reassure them about their safety.
4. Assign simple tasks for them to do, if they are able.

RECREATION

A. Appoint a recreation team and team head.

1. Sources will be persons familiar with planning and guiding recreational activities for children and adults, such as directors of youth groups, Y, welfare center, and recreation center workers, teachers, etc. Teenagers can be very useful in supervising activities of younger children. (See Table II, page 40.)

2. Duties will include planning and supervising leisure-time activities.

B. Assess shelter conditions and shelteree characteristics to determine what kinds of activities will be best to schedule.

1. Environmental conditions such as space, temperature, humidity, light, food and water status, and physical configuration will directly affect the kinds of activities that are possible. For example:

   a. Physical exercise should be avoided if temperature and humidity are high or a shortage of food and water exists.

2. Take cues for free-time activity from shelterees, and try to consider their interests and backgrounds.

   a. Early in the shelter stay, volunteer activities for care of sick, aged, and children should be encouraged.

   b. Spectator entertainments or games for adults may not be appropriate until a few days after shelter entry.

C. Encourage shelterees to enter into free-time activities. However, never force anyone to do so.

D. Improvise recreation resources.

1. It may be possible to make a checkerboard or playing cards with paper and crayons, etc.

RELIGIOUS ACTIVITIES

A. If shelterees feel a need for religious expression, recruit appropriate persons to perform religious functions, such as planning, organizing, and directing a program of religious activities. (See Table II, page 40.)

1. The team leader ideally should have formal religious training. If minister, priest, or rabbi is not available, then members of the church board, Sunday school teachers, or lay religious leaders may be selected.

B. Decide whether to have denominational or non-denominational services, depending on the wishes and religious preferences of the shelterees. If religious minorities are present, they should be given a chance to participate.

C. Have the team schedule religious services as appropriate and make up a program for these services.

1. All religious services are to be voluntary.

ROUTINE PHASE

(Remainder of the Shelter Stay)

By this time, most persons will have made basic adjustments to the shelter environment. However, within the routine phase some problems may arise brought on by the monotony and austerity of shelter living. These problems may take the form of lethargy or dips in morale and motivation. If possible, provide some variety in the shelter system, such as new task assignments, new activities, and changes in the shelter schedule. Also possible are bursts of activity and agitation as a result of news from the outside or from a competing leader who wants to "do something besides sit here."

Preparation should be started for living in the post-shelter world. Survival techniques are to be taught and a shift towards future rebuilding of the society should be stressed.

This section of the guide is organized alphabetically rather than by priority and only NEW points of shelter procedures or information are presented. Previous sections of this manual should be reviewed, because many of the earlier guidelines should still be applicable to the routine phase.

ATMOSPHERE CONTROL

A. Continue to monitor and regulate heat-producing activities, smoking, machinery exhaust, etc., to insure adequate ventilation.

B. Have regular maintenance performed according to directions on all equipment by qualified members of the operations, repair, and maintenance team.

C. Relocate shelterees, as necessary, according to temperature variations.

D. Allow shelterees to rest if they become sleepy from increased carbon dioxide and reduced oxygen levels.

E. Bring added fresh air into the shelter by opening the shelter and spreading out into new areas.

CARE OF AGED

A. Prepare aged persons for what to expect in post-shelter living and teach them basic survival techniques.

CHILD CARE

A. Add variety to the program of child care in order to keep the activity and noise levels of children from disrupting the shelter.

B. Try to find a way to vary the food in order to keep children eating.

C. Begin to prepare children for what they can expect in the post-shelter world.

COMMUNICATION

A. Continue to monitor all incoming and outgoing messages and record them in the log.

B. Share as much information as possible with the shelterees concerning changes in the outside environment and the estimated exit time.

C. If communication facilities are adequate, an effort may be made to locate missing family members. Initiation of this activity should be coordinated with the control center.

FIRE

A. Train in-shelter personnel for fire fighting.

B. Continue an around-the-clock fire watch.

C. Review fire procedures and conduct fire drills regularly.

FOOD

A. Review inventory and rationing procedures regularly.

B. Revise rationing procedures if necessary, considering number of shelterees, amount of food expected, and duration of shelter stay.

1. Reduce rations as necessary.

2. Reassure shelterees that the reduced ration will not be dangerous since most of them could survive the entire two weeks without any food.

3. Tell them that an emergency supply team will be sent out as soon as radiation levels permit.

C. Revise procedures for preparation and distribution as needed.

1. Some problems may be anticipated during the routine phase, such as reluctance to eat survival rations because of the monotony. Any food variation which can be introduced into the diet may improve morale significantly.

a. Even a thin topping of jelly or other food topping can improve the taste of the survival ration.

LIGHTING

A. If shelter illumination is expected to be inadequate, modify shelter procedures accordingly.

1. Night watch and monitoring personnel will have to be increased in number.

2. Supply distribution procedures may have to be altered.

3. Activities requiring little light will have to be improvised to keep shelterees from becoming restless and difficult to manage; for example, singing, story telling, resting.

4. The schedule should be changed to allow more time for carrying out shelter tasks.

MEDICAL

A. See that inventory and supply rationing procedures are regularly reviewed and revised as needed.

B. Have shelterees trained in first aid and in the care of the ill and injured.

C. Organize volunteer service teams to care for the ill and injured.

ORGANIZATION

A. Modify group and team assignments.

1. Group members may be reassigned in order to reunite families, friends, or groups of shelterees with similar interests and backgrounds.

2. Task team members and leaders may be reassigned after a specified tour of duty, particularly if special skills are not required. This should be done to insure rotation of personnel on unpleasant but necessary shelter tasks, as well as to introduce some variety into the individual's routine.

B. Encourage shelteree participation, particularly in decisions dealing with shelter living conditions and comfort.

POWER

A. Establish routine operations and maintenance procedures.

B. Monitor equipment regularly.

1. Likelihood of equipment failure will probably increase with shelter stay.

C. Review fuel inventory regularly and determine allocation of power for shelter uses.

PSYCHOLOGICAL SUPPORT

A. Continued strong leadership will be a large factor in establishing and maintaining emotional well-being.

RADIOLOGICAL PROTECTION

A. Train additional people to help with radiological work in order to:

1. Spread out work during temporary emergence period.

2. Reduce the radiation exposure per person by spreading the dosage over more people.

B. As radiation levels go down, assign RADEF team to monitor around and outside shelter to see when it will be safe to expand the shelter area or permit emergence.

C. Brief shelterees about the hazards of the external environment that they will have to face:

1. It will not be safe to leave until radiation has decreased to a very low level, since radiation exposure has cumulative effects.

a. Shelterees will be allowed a few minutes outside the shelter, as soon as it is permissible.

2. Discuss post-shelter techniques to determine whether food or water is safe to consume, and how to decontaminate items when necessary.

RECREATION

A. Try to introduce as much variety into recreation activities as possible to counteract boredom and depression.

1. Group-participation activities, such as a skit or amateur hour, may be well received at this time.

RELIGIOUS ACTIVITIES

A. Have the team conduct services for shelterees when desirable.

B. Have them counsel shelterees who request it and help in giving psychological support.

SAFETY

A. Continue instruction of shelterees concerning emergency procedures, such as rescue and evacuation, and hold drills regularly.

B. Continue to monitor the shelter for safety hazards.

SANITATION

A. Maintain high standards of sanitation for shelteree health and morale.

1. Hand cleaner may be used in small quantities by shelterees if enough appears available.

B. Re-evaluate possibility of sponge bathing.

C. Rotate members of sanitation team.

SHELTER ADMINISTRATION

A. Modify the shelter schedule to meet changing shelter situations and emergency contingencies.

B. See that records are kept up-to-date.

SLEEP

A. Reassign people as necessary to maintain control during sleeping hours.

B. Keep families and good friends together insofar as possible.

C. As the shelter stay progresses, people may tend to sleep and rest more than they did prior to entry due to decreased intake of oxygen, water and food.

D. Maintain social standards and control of noise during the night.

SOCIAL CONTROL

A. Review and modify rules as necessary according to shelter needs. Whenever possible, give shelterees a more active role in deciding rules for in-shelter living.

B. Watch for challenges to management authority and disturbances caused by boredom, anxiety, and general hostility to shelter confinement.

SUPPLY MANAGEMENT

A. Continue to inventory and reallocate rations as necessary.

B. Anticipate the need for various supplies and prepare priorities for emergency missions as soon as possible.

C. Prevent potential irregularities in supply consumption among shelterees from occurring.

1. Group and team leaders should see that items are consumed as intended or returned to the common stores.

2. Continual monitoring of the stocks will prevent loss of these stocks.

TECHNICAL OPERATIONS, REPAIR, AND MAINTENANCE

A. Establish routine monitoring and maintenance of the shelter and shelter equipment, and be prepared to repair equipment at any time.

TRAINING

A. Select subject material according to anticipated amount of time which will be spent in-shelter. Toward the middle of the stay, begin to inform shelterees about post-shelter conditions and means of survival.

WATER

A. See that the inventory and rationing procedures are regularly reviewed and revised as needed.

1. Factors which may affect rationing are:

   a. Water loss.

   b. Additional shelterees.

   c. The shelter stay extended longer than anticipated.

   d. High temperatures.

B. Decide whether the water supply is adequate enough to permit use of water for purposes other than drinking.

1. Extra water may be used for:

   a. Bathing.

   b. Sanitation and medical care.

   c. Fire suppression or decontamination.

2. Non-potable water can be used for sanitation, fire, and decontamination.

C. Train shelterees to know what liquids they can safely drink and where to obtain them once they leave the shelter.

TEMPORARY EMERGENCE PHASE

(Prior to anticipated exit time)

This period begins just before shelterees will be permitted to leave the shelter on missions of any kind. At this time, shelterees may experience heightened anxiety and attention may be directed away from the shelter and toward the outside world. Hostility that has been held back to avoid friction in such close contact may now be shown.

Local authorities will begin to set up rules and procedures and emphasis will be on training for special post-shelter jobs.

Again, this section has been alphabetized and only new information will be included.

ATMOSPHERE CONTROL

A. Repair ventilation equipment that is outside the shelter area.

CARE OF AGED

A. Try to locate family members to care for the elderly in the post-shelter world or identify agencies that can help care for the aged.

CHILD CARE

A. Teach children safety rules and simple survival techniques for the post-shelter environment.

B. See that children receive the lowest possible radiation exposure since it is more damaging to them than to fully grown adults.

COMMUNICATION AND ORIENTATION

A. Receive information on the external environment from the control center and other shelters.

B. Coordinate missions to the outside with the control center, if at all possible.

C. Allow shelterees to spend a few minutes outside the shelter entrance when radiation levels permit to familiarize them with environmental conditions which they may encounter.

D. Continue to try to locate and reunite families.

FIRE

A. Set up monitors for fire hazards (e.g., smoking) outside the shelter area when shelterees are permitted to go outside.

FOOD

A. When radiation levels permit, send out a mission to bring in additional food, if necessary.

B. See that all new supplies are visually inspected for radioactive particles.

C. Instruct shelterees about locating foods that are safe to eat.

MEDICAL

A. Allow volunteer medical personnel to go on emergency missions when requested by the control center and when radiation levels permit.

B. Have sick and injured relocated to medical facilities as soon as it is safe to transport them and facilities have been identified.

C. Persons who have received high radiation exposure may become ill with secondary symptoms of radiation sickness after several days to two weeks. Make them as comfortable as possible and treat the symptoms.

SHELTER ORGANIZATION

A. Select and prepare various task teams for work outside the shelter in cooperation with authorities.

B. Consider shelter organization requirements if shelter is to be used as a temporary base for feeding and sleeping during the initial recovery period.

PSYCHOLOGICAL SUPPORT

A. Prepare shelterees for what to expect in the post-shelter environment.

B. Encourage continued group cooperation.

C. Remove disturbed shelterees to appropriate facilities for proper care as soon as possible.

RADIOLOGICAL PROTECTION

A. As soon as radiation level permits, initiate limited outdoor activity depending on cumulative dose which shelterees have already received and the importance of the activity.

1. See Table V, page 55.

2. Non-essential outside activity may be permitted if shelterees have received a low cumulative radiation dose.

   a. Estimate time outside conservatively, giving a safety factor for return; e.g., if shelterees can safely stay out half an hour, allow only 15 or 20 minutes.

   b. Provide a dosimeter for each group that goes outside and have shelterees keep a record of the dose received.

   c. Monitor the number of shelterees allowed outside and carefully check to see that all are back in the shelter within the specified time.

3. Shelterees must stay in an area which has been monitored and declared relatively safe from radioactive hazard.

B. Because shelterees will become increasingly anxious to leave the shelter, stress the dangers of premature exit.

SAFETY

A. Clear debris outside the shelter, if any exists, to permit safe exit.

B. Control and time shelteree traffic movements in and out of the shelter once it is safe to leave the shelter for a few moments.

C. Insure that all shelterees return to the shelter within the permissible time limit.

SANITATION

A. Have sanitation team dispose of garbage and waste materials by placing them outside the shelter area and burying them as soon as possible.

SHELTER ADMINISTRATION

A. Turn over logs to appropriate authorities as soon as the shelter stay is terminated.

B. Return non-expendable items of personal property to shelterees.

SOCIAL CONTROL

A. Prepare to turn over shelter logs and serious rule violators to the proper authorities.

B. Inform shelterees of the governmental arrangements they can probably expect when they leave the shelter.

C. Prepare shelter living rules to be applied if the shelter is to be used as a temporary base for recovery operations.

SUPPLY MANAGEMENT

A. Recheck inventories to decide which supplies are needed for continued shelter living.

TRAINING

A. Review important post-shelter survival techniques.

WATER

A. If additional water must be brought in from the outside, inform emergency team about likely location of sources of water outside the shelter, such as canned juices, bottled water, soft drinks, etc.

B. See that new supplies of water are visually inspected for presence of radioactive particles.

CONTINGENCIES

(Shelter Emergencies)

Emergency situations require the manager's full concentration.

1. Try to get a clear picture of what has happened before making a decision.

2. Try to contact the control center for instructions and assistance by whatever means available.

3. The management goal to keep in mind is the safety and well-being of the largest possible number of shelterees.

IN THE EVENT OF OVERCROWDING

A. If people are outside who cannot be brought into this shelter because of space limitations, direct them to the next shelter.

1. The nearest fallout shelters are:

   a. _____

   b. _____

   c. _____

B. If people cannot reach other shelters, and if this building has areas that offer some radiation protection, persons should be allowed to enter these areas after being informed of the possible danger of limited protection.

1. Limited protection areas in the building are:

   a. _____

   b. _____

   c. _____

C. Try to assist people placed in lesser protected areas of the building.

1. Provide them with some shelter supplies.

2. Bring them into the shelter if it will not endanger the rest of the shelterees.

3. Relocate them as soon as radiation levels permit.

IF SHELTER HAS BEEN DAMAGED BY WEAPON'S EFFECT

A. Assess damage to shelter and surrounding areas.

B. Decide whether repairs can be made using the following criteria.

1. Can adequate fallout protection be re-established in time to protect shelterees?

2. How much radiation will be received before repairs can be completed?

3. Is another shelter close enough to provide a safer alternative than 1 or 2?

C. Decide what information to give shelterees in order that they may help, and not hinder, operations.

D. Assign personnel to extinguish all fires in and directly around the shelter and the building housing the shelter.

1. Trained firemen, if available, should supervise fire fighting in and directly around the shelter, supplemented by strong shelterees.

2. Fire extinguishers should be brought into the shelter from the building housing the shelter. Sand, water (if available from other than drinking supplies), blankets to beat out fires, etc. may also be used.

E. Assign personnel to repair any damage to the shelter, particularly in areas where fallout can enter.

1. Building maintenance men, construction workers and tradesmen, engineers, technical or former military personnel, etc. should be used to do this task. (See Table II, page 37.)

2. Equipment: If tools are not stocked, they may be available in or near the shelter area.

3. Procedures: All possible materials may be used to shore up weakened structural areas;

block openings where fallout could enter; check utility lines to see if they are operable and safe.

F. Assign a team to unblock the shelter exits.

G. If the shelter appears to be no longer habitable, consider the feasibility of evacuating the shelter.

1. For procedures, see shelter evacuation, pages 156-157.

IN THE EVENT OF FIRE

A. Quickly evaluate the seriousness of the fire and its consequences.

1. How many fires are there to extinguish?

2. What kind of fire-fighting equipment is available?

3. How many people are there to fight the fire?

4. Do you evacuate the shelter?

B. Direct shelter resources to fight fires.

1. The most appropriate fire extinguishers and material should be applied directly to the blaze.

   a. Wood, paper, or rubbish fires can be extinguished with water.

   b Gas, oil, or grease fires can be extinguished with sand or dirt, NOT WATER. Foam can be used, if available.

   c. Electrical fires can be extinguished with sand or dry chemical extinguishers. AFTER turning off electricity, water can be used.

   WARNING: Certain types of extinguishers (e.g., carbon tetrachloride, carbon dioxide) may be dangerous and should not be used in small rooms or poorly ventilated spaces, unless absolutely necessary.

2. Remove all combustible material near the fire, wet them down with water, or cover them with sand.

3. Decide whether or not to shut down ventilation equipment until fire is extinguished. If the fire is extremely smoky, the ventilation system may

be kept on to prevent suffocation even though the draft will fan the fire.

C. Prevent panic from occurring and keep shelterees from hampering fire fighters.

1. Talk to shelterees in order to reassure them.

2. Safety team should direct shelterees in fire procedures as pre-planned.

D. Determine the cause of the fire in order to prevent re-occurrence.

E. In the event of a mass fire, decide when to evacuate the shelterees and where to take them since the danger of superheated air and gases may extend for a large area outside the shelter.

IF RESCUE IS NECESSARY

A. If persons must be rescued due to damage in the shelter, assign a rescue team and team head from among shelterees.

1. Team may be recruited from the safety and repair teams, especially in small shelters. Sources include plant and maintenance men, police, building custodians, and other trade personnel.

2. A team will be composed of five to eight men.

3. Skills required include use of ropes and knots, knowledge of construction, etc.

B. If shelterees have become trapped, use following procedures.

1. Rescue procedures:

   a. Locate missing shelterees.

   b. Improvise necessary rescue equipment.

   c. Select the method of rescue safest for the shelter and remaining shelterees.

   d. Inform shelterees as to what they should and shouldn't do to assist the rescue operations.

   e. Determine how long the operation can go on before radiation levels will become dangerous.

IN THE EVENT OF EQUIPMENT FAILURE

A. In the event of a power failure or air-conditioning equipment failure, select one of the following three alternatives.

1. Repair the equipment.

2. Institute rigid procedures to keep the shelter liveable without the power or equipment.

3. Move shelterees to less protected areas within the building or to another shelter.

B. Recruit volunteers for an emergency mission outside the shelter to get parts for reparable machinery, if by doing so the majority of shelterees can be saved.

1. See emergency mission, pages 154-155.

IN THE EVENT OF MASS CASUALTIES IN THE SHELTER

A. Assign medical person(s) to assess nature and extent of illnesses and injuries among incoming shelterees and assign to appropriate treatment area.

B. If a trained person is not available, direct obviously seriously ill or injured into treatment area upon entry.

C. When people are entering the shelter too quickly to determine who is ill and injured, separate medical problems after the shelter is filled.

D. First treat those who are most likely to be saved by the medicines and care that are available.

IN THE EVENT OF DEATH IN THE SHELTER

A. In the absence of a trained medical person, be prepared to determine that a death has occurred.

1. Early indications include the absence of heart beat, pulse, and breathing. A mirror placed in front of the mouth or nose of the person will produce a film if the person is alive.

2. Later indications several hours after death are as follows:

   a. The cornea loses its transparency and appears to be milky.

   b. Body temperature drops.

   c. Rigor mortis or stiffening in the muscles and rigidity of the body will set in two to eight hours following death.

3. WARNING: Great caution must be exercised in pronouncing someone dead, since extreme shock or poisoning may produce similar appearances.

B. In the event of death, collect all personal effects and give them to the family if they are in the shelter, or tag them and store them in the administrative area to be given to the family later.

C. Have all vital information recorded.

1. This information includes name and address; date of death; cause of death, if known; name of immediate survivors; list of personal effects found on the body; last will, if expressed.

D. A simple religious service may be held for the dead, if requested by shelterees.

E. Have the body removed from the shelter and buried as soon as possible.

1. The body should be stored in the shelter only until it is possible to place it outside the shelter.

2. It should be wrapped in a sheet, removed from the main part of the shelter, and placed in the coolest location possible.

3. As soon as radiation levels permit, the body should be removed from the actual shelter—either to another part of the building or preferably outside the shelter.

4. The body should be buried under three feet of dirt or cremated, whichever is possible and desirable, as soon as radiation levels permit.

IF WATER SHORTAGE OCCURS

A. In the event of a water shortage, take actions which will make shelterees more comfortable and will reassure them.

1. Ration remaining water supply stringently.

2. Reduce activity to try to minimize thirst and lower shelter temperature.

3. Reassure shelterees that they can survive up to five days without water. This may be enough time to permit radiation levels to decrease to the point where a team can be sent out safely.

4. Send out a water team as soon as possible (see pages 154-155, emergency mission).

IF FOOD DEPLETION OCCURS

A. If food supplies become exhausted, try to make shelterees as comfortable as possible and reassure them that they can survive for more than two weeks without any food at all as long as water is available.

1. Remaining food should be stringently rationed.

2. Activity in the shelter should be reduced.

3. Send out a supply team for food as soon as possible, after more urgently needed supplies have been replenished. See emergency mission, pages 154-155.

IF AN EMERGENCY MISSION IS REQUIRED

A. Determine the priority for each mission.

1. Categories of emergency missions are:

   a. Supply trips for water, medicine, or other essential supplies.

   b. Service missions for essential activities such as decontamination, repair, and recovery operations.

   c. Voluntary trips, such as medical personnel responding to a shelter call for medical aid.

   d. Reconnaissance for availability of other critically needed shelter spaces.

B. Consider the specific factors for each mission before sending out an emergency team.

1. If a shelter has critical items stored for 250 shelter spaces and the shelter contains 450 persons, the manager may need to find additional sources of such things as water or medical supplies while radiation levels are still dangerous. You must decide:

   a. How far will the critical supply items stretch?

   b. How long can people survive with these supplies?

   c. How close is a probable source of the items?

   d. How long, that is how many trips, will it take to get an adequate supply?

2. These factors must be weighed against the risks from outside radiation, which are:

   a. How much exposure has the mission team already received?

   b. How much more can they, or other teams, be allowed to receive?

   c. What are present radiation levels outside the shelter?

C. Select a person from the radiological team to accompany the emergency mission.

1. Selection should be made on the basis of skills needed on the mission as well as previously accumulated radiation dose.

D. Establish procedures for the missions.

1. Safety procedures should be reviewed for each team.

2. Cumulative doses should be carefully recorded.

   a. Dosimeter should be worn.

   b. Survey meters should be carried to indicate relatively safe passages.

3. Instructions should be given on how long they can be gone and how much radiation they can be exposed to.

IN THE EVENT OF SHELTER EVACUATION

A. The decision to evacuate the shelter should be made *only as a last resort.*

1. Conditions which may require evacuation are fire, particularly mass fire, heavy structural damage, or highly inadequate ventilation.

2. The decision to abandon the shelter must be made if the alternative to evacuation is death for all or a large part of the shelter population.

B. Try to delay the evacuation for 24 to 48 hours in order to receive lower radiation exposures during the process of movement.

1. If the shelter has been badly damaged, it may be possible to find a protected area into which all shelterees can be temporarily crowded unless ventilation becomes a problem.

2. If ventilation is extremely inadequate, it may be possible to remain in the shelter temporarily by instituting rigid atmosphere and temperature control procedures.

3. Factors to be considered in moving are the dangers in leaving versus the dangers in staying. That is:

   a. External radiation levels.

   b. Average shelteree exposure already obtained.

   c. The allowable doses.

C. Set up procedures for the evacuation.

1. The safety; radiological; and technical operations, repair, and maintenance teams should make sure that a free passage exists, that doorways are unblocked, and that all shelterees are rescued.

2. All exits should be clearly marked and emergency procedures clearly understood by the shelterees.

3. When time and communication facilities permit, the local control center should be contacted to advise them of the evacuation plan and request recommendations in locating a new shelter.

4. A reconnaissance team, including radiological monitors, should survey the area, if there is time, to find the closest and most protected shelter.

   a. The priorities in locating a new shelter are:

      (1) Areas adjoining the shelter which may offer lower protection but which may be preferable to exposure of external radiation levels.

      (2) Other areas in the same building, such as upper floors.

      (3) Buildings adjoining the shelter area which provide protection and passage from one to another.

      (4) Buildings adjoining the shelter which may require certain passage to open spaces.

      (5) Other buildings in the area.

      (6) In the case of a mass fire, persons may have to flee from the entire surrounding area.

5. Shelterees should be told to move as quickly as possible in an orderly fashion.

6. Shelter supplies should be carried as long as they do not slow down the process of evacuation.

7. Some protection from fallout may be made by shelterees covering themselves with anything that can be shaken off, like a blanket or newspaper.

8. When shelterees arrive at the new shelter, they should be inspected for the presence of fallout particles and decontaminated by whatever methods are available.

SAMPLE SHELTER FORMS

REGISTRATION FORM

Shelter: ____________________

Registration Number: ____________________

Name ____________________

Address: ____________________

Age __________ Sex __________ Social Security No.: ____________________

Occupation: ____________________

Military Service Dates __________ Rank __________ Military Job __________

Civil Defense Training Yes ___ No ___ Which Kind? ____________________

Check the following activities in which you are skilled. Also circle any activities that are part of your Normal Occupation.

Administrator/Supervisor ___
Air Conditioning and Ventilation Repair ___
Appliance Repair ___
Building Custodian ___
Carpentry ___
Child Care ___
Clergy ___
Construction ___
Counseling, (Youth, Vocational) ___
Dentistry ___
Electrical Repair ___
Electronic Technician ___
Warehouse Management ___
Other: ____________________

Engineering ___
Equipment Maintenance and Repair ___
Fire Fighting ___
First Aid Training ___
Food Preparation ___
Medicine ___
Military Police ___
Nursing ___
Office Management ___
Pharmacy ___
Plant Maintenance ___
Plant Safety ___
Plumbing ___
X-Ray Technician ___
____

Police/Security ___
Psychiatry/Psychology ___
Radio Operating ___
Radiological Training ___
Safety Engineering ___
Science ___
Science Teaching ___
Secretarial ___
Social Work ___
Store Managing ___
Supply or Parts Distribution ___
Teaching ___
Veterinary Medicine ___
____

Education: (Circle last year of school completed)

Grade School: 1 2 3 4 5 6 7 8 High School: 1 2 3 4 College: 1 2 3 4

Other (Specify) ____________________

Medical Problems requiring immediate or special attention: ____________________

Initial Assignment ____________________ Permanent Assignment: ____________________

Other Members of Immediate Family:

Name	Relation	Age	Check if with you	If elsewhere indicate where if known

Religious Preference: ____________________

List Hobbies, Talents, Skills not already mentioned: ____________________

DO NOT WRITE BELOW THIS LINE

Group Assignment: ____________________ Task Assignments: ____________________

Personal Property: Items Items Items

____

In-Shelter Medical Problems ____________________

Other ____________________

SHELTER LOG

SHELTER _____

NO.	DATE/TIME	TYPE OF EVENT	DESCRIPTION OF EVENT	REG. FORM

COMMUNICATIONS LOG (INCOMING)

NO.	DATE/TIME	TYPE	SENDER	RECIPIENT	CONTENT	INIT.

COMMUNICATIONS LOG (OUTGOING)

NO.	DATE/TIME	TYPE	SENDER	RECIPIENT	CONTENT	INIT.

RADIATION MONITORING LOG

SHELTER _____

Shelter Areas	Date: 7/16 Time: 1200 Dose Rate	Accum.	Date: 7/16 Time: 1800 Dose Rate	Accum.					Remarks/Initials
Area 1	1 r	1 r	.9 r	1.9 r					
Area 2	1.5 r	1.5 r	1.3 r	2.8 r					

RADIATION EXPOSURE RECORD

RADIATION EXPOSURE RECORD

Name John Doe

Address 227 N. Moorland

Battle Creek, Michigan

Soc. Sec. No. 545-76-5535

Date(s) of Exposure(s)	Daily Dose(s)	Total Dose to Date
6/6/62	15	15
6/7/62	5	20
6/7/62	25	45
6/8-6/10/62	5	50

NOTE

Date(s) of Exposure	Daily Dose(s)	Total Dose to Date

This form was taken from the Handbook for Radiological Monitors (Office of Civil Defense, April 1962), page 33

SUPPLY STATUS SUMMARY (UCD STOCKS)

SHELTER _____

PRE-OCCUPANCY INVENTORY DATE OF INVENTORY: _____	INITIAL IN-SHELTER INVENTORY DATE TIME	AVAILABLE AS OF: DATE TIME								REMARKS
BISCUITS										
___Cases, 2.5 gal. cans per case										
___Cases, 5 gal. cans per case										
WATER										
___Drums, 17.5 gal.										
___Cartons, polyethylene liners 20 each										
SANITATION KITS										
___Kits, Model III 25 persons										
___Kits, Model IV 50 persons										
___Drums, fiber (1 drum per kit)										
CONTENTS OF KITS										
___Toilet tissue rolls										
___Can openers										
___Sanitary napkins, heavy duty, doz.										

SAMPLE DAILY SCHEDULE FOR SINGLE-SHIFT SHELTERS

0700	Reveille
0730	Receive breakfast rations
0800	Eat breakfast
0830	Clean-up
0900	Sick call
0930	Training session or group meeting or continuation of sick call or recreation
1000	Water and biscuit break
1030	Training session for adults and older children / Ongoing education
1100	Training session for adults and older children / for young children
1130	Free time for quiet activities/Naps
1200	Receive lunch rations
1230	Eat lunch
1300	Clean-up
1330	Information and training session / Recreation or education
1400	Information and training session / for children
1430	Emergency drills
1500	Water and biscuit break
1530	Recreational activities
1600	Recreational activities
1630	Free time for quiet activities/Naps
1700	Receive dinner rations
1730	Eat dinner
1800	Clean-up
1830	Daily briefing
1900	Training session
1930	Planned recreational activities
2000	Planned recreational activities
2030	Free time for quiet activities
2100	Free time for quiet activities
2130	Water and biscuit break
2200	Free time for quiet activities
2230	Prepare for sleep
2300	Lights out

SAMPLE DAILY SCHEDULE FOR TWO-SHIFT SHELTERS

SHIFT A	TIME	SHIFT B
Reveille	0700	Recreation
Receive breakfast rations	0730	Recreation
Eat breakfast	0800	Free time for quiet activities
Clean-up	0830	Prepare for sleep
Sick call	0900	Sleep
Group meeting/sick call	0930	
Water break; opt. biscuit break	1000	
Training session	1030	
Training session	1100	
Free time for quiet activities	1130	
Receive lunch rations	1200	
Eat lunch	1230	
Clean-up	1300	
Training session	1330	
Training session	1400	
Water break; opt. biscuit break	1430	
Quiet recreation	1500	
Quiet recreation	1530	
Free time	1600	
Receive dinner ration	1630	
Eat dinner	1700	Reveille
Clean-up	1730	Receive breakfast rations
Free time	1800	Eat breakfast
Recreation	1830	Clean-up
Recreation	1900	Sick call
Shelter briefing	1930	Shelter briefing
Training session	2000	Training session
Emergency drills	2030	Emergency drills
Water break; opt. biscuit break	2100	Water break; opt. biscuit break
Free time for quiet activities	2130	Free time for quiet activities
Free time for quiet activities	2200	Receive lunch rations
Prepare for sleep	2230	Eat lunch
Sleep	2300	Clean-up
	2330	Training session
	2400	Training session
	0030	Water break; opt. biscuit break
	0100	Quiet recreation
	0130	Quiet recreation
	0200	Free time for quiet activities
	0230	Receive dinner rations
	0300	Eat dinner
	0330	Clean-up
	0400	Training session
	0430	Training session
	0500	Free time for quiet activities
	0530	Free time for quiet activities
	0600	Group meeting
	0630	Water break; opt. biscuit break

SUBJECT INDEX (BY SHELTER PHASE)

HOW TO USE THIS INDEX:

1. ↓ Scan down the left hand "Subject" column to locate topic you are interested in.

2. → Scan across the row until you find appropriate shelter phase.

3. Most general information is contained in "Initial Organization & Operations" column.

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13 ABSTRACT

This Shelter Manager's Guide provides a step-by-step manual on how to organize and operate a fallout shelter. The contents, although generalized, should allow a trained, or untrained, shelter manager to cope with the situations and problems of in-shelter living and emergency conditions in a nuclear disaster. The material in the Guide is organized into significant management decisions and actions which must be carried out. Under each decision or action, the appropriate supporting information will be found. Wherever possible, these management items have been placed by order of priority within each section (such as organization, radiological protection, supply management, etc.)

The manual has been set up in five major temporal divisions or phases: Entry, Initial Organization and Operations, Routine, Temporary Emergence, and Contingencies. Within the first two, Entry and Initial Organization and Operations, the sections mentioned above have been placed in order of priority. In the Routine and Temporary Emergence phases, sections are arranged alphabetically. The Contingencies section has no specific order, although an effort has been made to place the subjects in possible order of occurrence.

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